

## **Historic, Archive Document**

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VOL. XVII. NO. 14.

JULY 15, 1889.

S. W. Conrad  
Printed

PEACE ON EARTH  
★  
GOOD WILL TOWARD MEN



CLEANING  
IN

BEE CULTURE

DEVOTED  
TO

& HOME INTERESTS.

MEDINA, OHIO  
BY  
A. ROOT

TERMS, ONE DOLLAR PER YEAR.

ENTERED AT THE POSTOFFICE, MEDINA, OHIO, AS SECOND-CLASS MATTER.





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## Carniolan Queens.

Importing and breeding this race exclusively since 1884; the demand for them has more than doubled each season. Send postal for circular, or \$1 for choice untested queen; \$5 per 10 doz.; \$5 for Benton's best grade imported queen. 11ftdb

S. W. MORRISON, Oxford, Chester Co., Pa.

☞ In responding to this advertisement mention GLEANINGS.

## AMERICAN ALBINO ITALIAN QUEENS BY RETURN MAIL.

Tested, \$1.50; untested, 75 cents each. All our queens are reared this season under the natural swarming impulse, from the best selected stock. Satisfaction guaranteed. Remit by registered letter, or money order, payable to

LEININGER BROTHERS,  
Douglas, Putnam Co., Ohio.

☞ In responding to this advertisement mention GLEANINGS.

### IF YOU ARE IN WANT OF

## BEES or BEE-KEEPERS' SUPPLIES,

Send for our New Catalogue.

OLIVER HOOVER & CO.,  
Snydertown, Pa.

4ftdb

☞ In responding to this advertisement mention GLEANINGS.

## SAVE FREIGHT.

BUY YOUR SUPPLIES NEAR HOME AND SAVE FREIGHT.

We carry a complete line of Hives, Sections, Smokers, Honey Extractors, etc. Our motto, good goods and low prices. Sections in large quantities, only \$3.25 per M. Illustrated catalogue for your name on a postal card.

R. B. LEAHY & CO.,  
Box 11. Higginsville, Mo.

3-14db

☞ In responding to this advertisement mention GLEANINGS.

## Bees & Poultry

The Canadian Bee Journal and Poultry Weekly is the best paper extant devoted to these specialties. 24 pages, WEEKLY, at \$1.00 per year. Live, practical, interesting. Nothing stale in its columns. Specimen copies free. Subscribers paying in advance are entitled to two insertions of a five-line adv't (40 words) in the Exchange and Mart column.

THE D. A. JONES CO., BEETON, ONTARIO, CAN.

☞ In responding to this advertisement mention GLEANINGS.

## I AM AWAITING YOUR ORDER FOR 3-FRAME NUCLEI.

Price, with untested queen, \$3.00. Best tested queen, \$4.00; 2 frame nuclei, 50 cts. less. Combs straight and true; all worker comb, and bees finest of Italians. One untested queen, \$1.00; 6 for \$5.00. Best tested, \$2.50 each.

JNO. A. THORNTON,

Exp. Office, Ursa, Ill.  
Mention GLEANINGS.

Lima, Ill.  
12-17db

## LOOK HERE! Cheap Enough At Last.

Full colonies of pure Italian bees in A. I. Root's Simplicity hive, only \$4.00 each. Now ready to ship. Frames, wired combs drawn from fdn., every thing first-class. Write for prices of Poland-China swine, White and Brown Leghorn chickens, and Mallard ducks. Eggs for hatching. Also white and black ferrets. Address N. A. KNAPP, ROCHESTER, LORAIN CO., OHIO. 11ftdb

☞ In responding to this advertisement mention GLEANINGS.

## JAS. F. WOOD, NORTH PRESCOTT, MASS.,

Will now ship by return mail, his warranted queens to any address, for 75 cts. each, or \$8.00 per dozen. Single queen to Canada, 85 cts. Being isolated from all black bees I am able to warrant every queen purely mated, and safe arrival guaranteed. Every queen is of good shape, and all have filled several combs with eggs before being shipped. I will replace every queen that hatches a black bee with a select tested queen, worth \$2.00.

If you want the best queens promptly, send me your orders. I am bound to suit you. Address as above. 13ftdb

## JAPANESE BUCKWHEAT!

By freight or express, not prepaid.

Per bu., \$2.00; per ½-bu., \$1.25; per peck, 75 cts.; 5 lbs., 50 cts.; per lb. by mail post-paid, 25 cts. Address

John C. Gilliland,  
Bloomfield, Greene Co., Ind.

5-14db

☞ In responding to this advertisement mention GLEANINGS.

## A STEP FORWARD TOWARDS SUCCESS!

After carefully studying the demand of consumers and dealers, and selecting of the many styles of packages for comb honey the very best and the most attractive, we have now prepared an improved paper carton combined with a comb-protector. Honey, put up in these packages, will be bought in preference to all others at highest market price. Our patent comb-protector will prevent leakage and soiling of sections. Comb honey can be easily and quickly put up in our cartons. These advantages and the small cost of our cartons and comb-protector will save labor, time, money, and honey. Strohmeyer's patent comb-protectors require ⅓ inch of the inside height of crates. Price list and sample carton sent free on application.

F. G. STROHMEYER & CO.,

Wholesale Honey Merchants,

122 Water Street, New York,



## DADANT'S FOUNDATION

Is kept for sale by Messrs. T. G. Newman & Son, Chicago, Ill.; C. F. Muth, Cincinnati, O.; Jas. Heddon, Dowagiac, Mich.; O. G. Collier, Fairbury, Nebraska; B. J. Miller & Co., Nappanee, Ind.; E. S. Armstrong, Jerseyville, Ill.; E. Kretchmer, Coburg, Iowa; P. L. Viallon, Bayou Goula, La.; M. J. Dickason, Hiawatha, Kansas; J. W. Porter, Charlottesville, Albemarle Co., Va.; E. R. Newcomb, Pleasant Valley, Dutchess Co., N. Y.; D. A. Fuller, Cherry Valley, Ill.; J. B. Mason & Sons, Mechanic Falls, Maine; G. L. Tinker, New Philadelphia, O.; Jos. Nyswander, Des Moines, Ia.; C. H. Green, Waukesha, Wis.; G. B. Lewis & Co., Watertown, Wisconsin; J. Mattoon, Atwater, Ohio, Oliver Foster, Mt. Vernon, Iowa; C. Hertel, Freeburg, Illinois; Geo. E. Hilton, Fremont, Mich.; J. M. Clark & Co., 1409 15th St., Denver, Colo.; Goodell & Woodworth Mfg. Co., Rock Falls, Ill.; J. A. Roberts, Edgar, Neb.; E. L. Gould & Co., Brantford, Ontario, Canada; J. N. Heater, Columbus, Neb.; E. C. Eaglesfield, Berlin, Wis.; C. D. Battey, Peterboro, Mad. Co., N. Y.; G. K. Hubbard, Fort Wayne, Ind., and numerous other dealers.

We guarantee every inch of our foundation equal to sample in every respect. Every one who buys it is pleased with it.

Write for free samples, and price list of bee-supplies and specimen pages of the new

## REVISED LANGSTROTH BOOK,

Edition of 1889.

3tfdb

CHAS. DADANT & SON,

Hamilton, Hancock Co., Illinois.

In responding to this advertisement mention GLEANINGS.

## KEYSTONE APIARY.

### Imported and Alley Queen-Mothers

Tested, June..... \$3.00; July to October..... \$2.50  
Fertile, " ..... 1.50; " " ..... 1.00  
Virgin, " to October ..... 50c  
Alley drone and queen traps at regular prices.  
Send for circular. W. J. ROW,  
Mention Gleanings. 10-15db Greensburg, Pa.

## APIARIAN SUPPLIES CHEAP.

BASSWOOD V-GROOVE SECTIONS, \$2.75 to \$3.75  
PER M. SHIPPING-CASES VERY LOW.

SEND FOR PRICES.

GOODELL & WOODWORTH MFG. CO.,

3tfdb

ROCK FALLS, ILLINOIS.

In responding to this advertisement mention GLEANINGS.

## CHOICE ITALIAN QUEENS.

Tested, \$1.25 each; untested, June to Oct., 75 cts.; 3 for \$2.00. Annual price list of nuclei, bees by the pound, and bee-keepers' supplies, free.  
11tfdb JNO. NEBEL & SON, High Hill, Mo.

## Gift! Gift! Gift!

To every purchaser of one tested yellow Italian queen, in June and after, for \$1.50, I will give one L. frame nucleus, 50 cts., for each added frame of brood and bees. Tested queens, \$1.25; untested, \$1.00. Send for price list.

MRS. OLIVER COLE,  
Sherburne, Chen. Co., N. Y.  
Chenango Valley Apiary. 10tfdb

In responding to this advertisement mention GLEANINGS.

A NEW BOOK ON BEES, and DADANT'S FOUNDATION.  
See advertisement in another column.

## FOUND AT LAST!

How to cheaply keep eggs fresh for a year. Send for particulars.  
DR. A. B. MASON,  
9-14db Auburndale, Ohio.

In responding to this advertisement mention GLEANINGS.

## B. J. MILLER & CO., NAPPANEE, IND.,

### BEE - HIVES AND ITALIAN QUEENS.

4¼x1¼ Sections, from 500 to 3000, at \$3.50 per 1000; if you want more than that, write for prices. Brood-frames, T-tin Cases, Foundation, and Metal Corners. Send for price list. 1tfdb

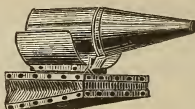
In responding to this advertisement mention GLEANINGS.



Bingham & Hetherington's Honey-knife. Patented 18'9.

Bingham Smokers and Bingham & Hetherington Honey-knives are staple tools, and have been used ten years without complaint. The smokers last, work easily, throw a stream of smoke ten feet, and save time, stings, and money. Send card for descriptive circular of the cheapest and best tools in use—free.

## THEY LAST.



ADDISON, VT.—Have one of your smokers, good yet, used 6 years. E. J. SMITH.

SILVER CREEK, KY.—I have had one of your smokers 3 years, and it is as good as new. T. W. HUDGENS.

Patented 1879. ELM GROVE, MASS.—Have one I have used six seasons, good yet.

F. M. TAINTOR.

AUSTIN, TEXAS, Apr. 24, 1889.—Goods came through in good order. We are glad we can show our customers a full line of solid comfort.

Fraternally, J. W. TAYLOR.

FARINA, ILL., Mar. 23, 1889.—Those who see me use your smoker can not be persuaded to buy any other. They stand the test and do the work every time. Respectfully, M. D. HEWETT.

### PRICES:

By mail, postpaid.  
Doctor smoker (wide shield) ..... 3½ inch ..... \$2 00  
Conqueror smoker (wide shield) 3 " ..... 1 75  
Large smoker (wide shield) ..... 2½ " ..... 1 50  
Extra smoker (wide shield) ..... 2 " ..... 1 25  
Plain smoker ..... 2 " ..... 1 00  
Little Wonder smoker ..... 1½ " ..... 65  
Bingham & Hetherington Honey-knife ..... 1 15

TO SELL AGAIN, apply for dozen or half-dozen rates. Address T. F. BINGHAM, or 11-16db BINGHAM & HETHERINGTON, Mention GLEANINGS. ABRONIA, MICH.

## BEE-HIVES, SECTIONS, ETC.

WE make the best bee-hives, shipping-crates, sections, etc., in the world, and sell them cheapest. We are offering our choicest white one-piece 4¼x1¼ sections, in lots of 500, at \$3 50 per 1000.

Parties wanting more, write for special prices. No. 2 sections, \$2.00 per 1000. Catalogues free, but sent only when ordered. 1tfdb

C. B. LEWIS & CO., Watertown, Wis.

In responding to this advertisement mention GLEANINGS.

## A Four-Color Label for Only 75 Cts. Per Thousand!

Just think of it! we can furnish you a very neat four-color label, with your name and address, with the choice of having either "comb" or "extracted" before the word "honey," for only 75 cts. per thousand; 50 cts. per 500, or 30 cts. for 250, postpaid. The size of the label is 2¼ x 1 inch—just right to go round the neck of a bottle, to put on a section, or to adorn the front of a honey-tumbler. Send for our special label catalogue for samples of this and many other pretty designs in label work.

A. I. ROOT, Medina, O.

## Crawford's Folding Paper Boxes

For Inclosing Section Honey.

THE BEST BOX FOR THE LEAST MONEY!  
\$5.00 Per 1000

and less, according to quantity. Send for sample and price list. A. O. CRAWFORD, S. WETMOUTH, MASS.

In responding to this advertisement mention GLEANINGS.

### SHIPPING - CASES

To hold twelve 4 $\frac{1}{2}$ x1 $\frac{1}{2}$  sections, or fourteen 7 to the foot, \$6.00 per 100; 2x9 glass for same, 65 cts. per 100. Free price list of Bees, Queens, Nuclei, and every thing needed in the apiary. M. H. HUNT, 14-16-18d Bell Branch, Mich.

**FOR SALE AT \$500.**—20 acres of fine pine land, 100 small orange-trees, etc. One-quarter mile from station, store, postoffice, mill, church, and school. Title good. Address AUG. LEYVRAZ, Francis, Fla.

## A RARE CHANCE!

Correspondence wanted with some one that will buy 15 full colonies of bees at \$3.00 per colony. Simplicity hives, combs built from fdn., and every thing first-class. Must be sold, as I can not attend to them another season. DR. CARL TUTTLE, Berlin Heights, Erie Co., Ohio.

In responding to this advertisement mention GLEANINGS.

## WANTED! TO REDUCE STOCK!

For the next 30 days we will sell untested Italian queens, at 55 cts. each; 6 for \$3.00; 12 for \$5.75. Tested, \$1.00 each. Bees for sale cheap. 14-15d R. B. LEAHY & CO., Higginsville, Mo.

**FOX-HOUND PUPPIES FOR SALE.**—First-class stock. Address C. A. WOOD, 13tfdb Tarrytown, Westchester Co., N. Y.

### MUTH'S

## HONEY-EXTRACTOR,

SQUARE GLASS HONEY-JARS,

TIN BUCKETS, BEE-HIVES,

HONEY-SECTIONS, &c., &c.

PERFECTION COLD-BLAST SMOKERS.

Apply to CHAS. F. MUTH & SON, CINCINNATI, O.

P. S.—Send 10-cent stamp for "Practical Hints to Bee-Keepers." (Mention Gleanings.) 14fdd

**ITALIAN BEES AND QUEENS.** Tested queens, \$1.50. Untested, 80c. Bees, per lb., \$1.00. Frame of brood, 50 cts. Nuclei a specialty. Send card for price list. MISS A. M. TAYLOR, 9 10tfdb Box 77. Mulberry Grove, Bond Co., Ill.

In responding to this advertisement mention GLEANINGS.

### Italian Queens by Return Mail.

Tested, \$1.00; untested, 50c each, or more at same rate. 10tfdb I. GOOD, SPARTA, WHITE CO., TENN.

## LITHOGRAPH LABELS

In 12 Colors, at \$2.00 per 1000.

The 12 colors are all on each label. They are oblong in shape, measuring 2 $\frac{1}{2}$ x2 $\frac{1}{2}$ . They are about the nicest labels we ever saw for glass tumblers, pails, and small packages of honey. We will mail a sample, inclosed in our label catalogue, free on application, and will furnish them postpaid at the following prices: 5 cts. for 10; 35 cts. for 100; \$1.20 for 500; \$2.00 for 1000. A. I. ROOT, Medina, O.

## Wants or Exchange Department.

Notices will be inserted under this head at one-half our usual rates. All ads intended for this department must not exceed 5 lines, and you must say you want your ad. in this department, or we will not be responsible for any error. You can have the notice as many lines as you please; but all over five lines will cost you according to our regular rates. This department is intended only for bona-fide exchanges. Exchanges for cash or for price lists, or notices offering articles for sale can not be inserted under this head. For such our regular rates of 20 cts. a line will be charged, and they will be put with the regular advertisements.

**WANTED.**—To exchange 3 new Novice style extractors (for L. frame) worth \$7.00 each, for small printing-press, etc., or something else useful. 14 16db S. S. LAWING, Henderson, Webster Co., Mo.

**WANTED.**—Any one that has a book suitable for a mission Sunday-school, and would like to donate the same, to send it by mail to 13tfdb GEO. E. HILTON, Fremont, Newaygo Co., Mich.

**WANTED.**—To exchange 250 colonies of bees, for horses, mules, wagons, buggies, and 4 h. p. engine, or any thing useful on a plantation. 21tfdb ANTHONY OPP, Helena, Phillips Co., Ark.

**WANTED.**—To sell or exchange, Italian bees and queens, and supplies. Address OTTO KLEINOW, 4tfdb No. 150 Military Ave., Detroit, Mich.

**WANTED.**—To exchange a complete apiary of 25 colonies choice Italians and all needed fixtures for a 56-in. bicycle or offers, a rare bargain. 13d H. C. CRAGG, Groesbeck, Hamilton Co., Ohio.

**WANTED.**—To exchange a foot-power machine for perforating zinc honey-boards; and a machine for weaving wire and picket fence, for a lawn-mower, or any thing useful. 14d M. W. SHEPHERD, Rochester, Ohio.

**WANTED.**—To exchange 80 acres of land in the basswood belt of Wis. A splendid location for bees, for full colonies of bees, and supplies. For information, address B. J. THOMPSON, 14-15d Waverly, Pierce Co., Wis.

**WANTED.**—To exchange a Barnes' com. saw, for honey or wax. J. C. MILLMAN, Elk Grove, Wis. 14d

## Black and Hybrid Queens For Sale.

Black and hybrid queens for sale, 30 and 50 cts. respectively. J. A. KIME, Fairfield, Pa.

Now ready to mail, Italian-hybrid queens at 30c each. N. A. KNAPP, Rochester, Lorain Co., O. 13-14d

Fifty mismatched Italian and hybrid queens for sale at 25 cts. each. J. C. WHEELER, Plano, Ill.

A few mismatched Italian queens at 25 cts. each; five for \$1.00. GEO. L. JONES, Grand Ridge, Ill.

**FOR SALE.**—For 6 weeks, 4 or 5 black queens per week, 15 cts. each. F. R. KOONS, East Boston, N. Y.

A few hybrid-Italian queens in Peet's cages during July and August at 30 cts. each. Write before sending money, as queens may be sold. G. WIEDERHOLD, Yonkers, N. Y.

**FOR SALE.**—A lot of black and hybrid queens. Five blacks or 14 hybrids for one dollar. H. F. HART, Avery, La.

Twelve hybrid queens for sale at 21 cts. each. These queens are very prolific, having been raised in full colonies, under the swarming impulse. J. H. JOHNSON, Middaghs, Pa.

Having purchased a large apiary of choice black and hybrid bees, I will sell the queens at 20 cts. and 30 cts. respectively. OLIVER FOSTER, 13tfdb Mt. Vernon, Linn Co., Iowa.



## HONEY COLUMN.

### CITY MARKETS.

**BOSTON.**—*Honey.*—We are entirely out of comb honey; not a case in the store—something that has not happened for a long time. We are expecting new every day. Price will be about 18 cts. We have received some new extracted white clover from Vermont, selling at 8 to 9 cts.  
July 10. **BLAKE & RIPLEY,**  
Boston, Mass.

**NEW YORK.**—*Honey.*—Extracted is scarce. We quote orange bloom and palmetto at 7@7½. California, new light amber, 7@7½. Southern, inferior grades, 65@70. California, comb honey, new, 1-lb. sections, in eastern style, 12@14.  
July 10. **F. H. STROHMEYER & Co.,**  
New York.

**CHICAGO.**—*Honey.*—Some of the new crop has come to market, and has sold from 15@17; the higher price being paid for a good straight lot of scant one-pound sections, all combs being straight, color and flavor that of white clover. The market will not be active until later in the summer. New extracted, 7@8. *Beeeswax*, 25. **R. A. BURNETT,**  
July 11. 161 So. Water St., Chicago, Ill.

**CINCINNATI.**—*Honey.*—Arrivals are fair of new extracted and comb honey. Demand is slow. We quote 5@8 on arrival as the range of extracted honey, and 12@15 for fair to choice comb honey in the jobbing way. *Beeeswax*. There is a good demand at 20@22 on arrival for good to choice yellow.  
July 13. **CHAS. F. MUTH,**  
Cincinnati, Ohio.

**KANSAS CITY.**—*Honey.* New comb honey, firm, this State coming in quite freely; selling slowly at 16@18 for 1-lb. sections. No new extracted in market. *Beeeswax*, none. **CLEMONS, CLOON & Co.,**  
July 10. Kansas City, Mo.

**ST. LOUIS.**—*Honey.*—Market quiet, with sales ranging from 6¼@6½ in barrels for light, good flavor. Dark, 5@5½. *Beeeswax*, prime, scarce at 25.  
July 10. **D. G. TUTT GRO. Co.,**  
St. Louis, Mo.

**DETROIT.**—*Honey.*—The market is lifeless. What little honey there is left is poor. No new honey in. Comb honey, 12@15. *Beeeswax*, 25. **M. H. HUNT,**  
Bell Branch, Mich., July 10.

**COLUMBUS.**—*Honey.*—Honey is coming in very slow. Too much swarming in this section. Some good white honey would find ready sale in our market at 15@16 in 4¼x4¼ sections.  
July 11. **EARLE CLICKENGER,**  
Columbus, Ohio.

**FOR SALE.**—Extra choice clover honey in boxes of two 60-lb. tin cans each per box (120 lbs. net), \$10.00. **OLIVER FOSTER, Mr. Vernon, Linn Co., Ia.**  
14tfdb

**FOR SALE.**—New extracted honey, white clover and lind. In tin cans. Write for sample and prices.  
**J. B. MURRAY, Ada, Ohio.**

**FOR SALE.**—1000 lbs. new first-class white clover extracted honey, at 7 cts. per lb., in lots of 100 or more lbs., delivered on board of cars free; purchaser furnishing packages, or paying undersigned for same at A. I. Root's prices.  
**MRS. N. M. OLSEN, Nashotah, Wis.**

**THE REVISED LANGSTROTH, and DADANT'S FOUNDATION.**  
See advertisement in another column.

## HOW TO MANAGE BEES; OR, BEE-KEEPING FOR THE "MASSES."

Every farmer, and all beginners in bee-keeping, as well as those more advanced, should have it, as it is especially adapted to their wants. Fully up to date. Price \$1.00, by mail. In beautiful paper covers. Illustrated. Address

8-6d **W. S. VANDRUFF, Waynesburg, Pa.**

12 In responding to this advertisement mention GLEANINGS.

## A POSITIVE FACT

### QUEENS BY RETURN MAIL

From the Old and Reliable Knickerbocker Bee-Farm (Established 1880).

### Circular and Price List Free.

13-14tfdb **G. H. KNICKERBOCKER,**  
BOX 41. Pine Plains, Dutchess Co., N. Y.

12 In responding to this advertisement mention GLEANINGS.

## 100 2 L. Frame Nuclei,

With pure Italian queen, and 1 lb. of bees extra. I have shipped bees to almost every State in the Union, and I always please the buyer. Any who prefer can send their money to A. I. Root, and their orders to me, and they will be filled promptly. There has never been any foul brood in this section. Queens are all young. Price \$1.50 per nucleus.

**C. E. JONES, Delaware, Ohio.**

12 In responding to this advertisement mention GLEANINGS.

## THE BEE-KEEPER'S TEXT-BOOK.

The new revision of the BEE-BEEPER'S TEXT-BOOK is now out, and ought to be in the hands of every bee-keeper. Its simplicity of language makes it a guide to the beginner. It treats on just the subjects that the beginner wants to know; answers just the questions he would ask. For the next 90 days we will send postpaid the text-book and the ADVANCE one year for \$1.00; or if paper cover, for 75 cts.

Address **THE ADVANCE,**  
Mechanic Falls, Me.

## PRICES REDUCED.

Untested queens, 65 cts.; 10 for \$6.00. Select tested, \$1.50; ten 2-cent stamps taken where postal notes can not be had. Can send by return mail. Money orders payable at Nicholasville.

**J. T. WILSON, Little Hickman, Ky.**

## The Best Queen in the Country.

Putnyville, Pa., July 1, 1889.

**Henry Alley:**—The queen I bought of you in 1889 is the best queen in this country. I would not take \$15 for her. I advise all my bee-keeping brothers to buy their golden-yellow queens of you.

**CLARK SHREKENHORST.**

All our queens are reared in full colonies having fertile queens. No queens reared in queenless colonies in the Bay State Apiary.

Prices.—Warranted, \$1.00; select warranted, \$1.25; tested, \$1.50; select tested, \$3.00. Safe arrival guaranteed. Our circular gives simple instructions for finding a queen in a colony, and a safe method for introducing queens.

14tfdb **HENRY ALLEY, Wenham, Mass.**

12 In responding to this advertisement mention GLEANINGS.

## THE BEE-KEEPERS' REVIEW.

A 50-cent monthly that gives the cream of apicultural literature; points out errors and fallacious ideas; and gives, each month, the views of leading bee-keepers upon some special topic. Three samples free.

**W. Z. HUTCHINSON, Flint, Mich.**

Please mention GLEANINGS.

13tfdb

## HONEY, BEES, QUEENS, SUPPLIES.

Catalogue Free.

**OLIVER FOSTER, MT. VERNON, IOWA.** 3tfdb

**THE HIVE AND HONEY-BEE, and DADANT'S FOUNDATION.**  
See advertisement in another column.



**Eaton's Improved SECTION CASE.**  
BEES AND QUEENS. Send for free catalogue. Address

**FRANK A. EATON,**

5-16db Bluffton, Ohio.

12 In responding to this advertisement mention GLEANINGS.





Vol. XVII.

JULY 15, 1889.

No. 14.

TERMS: \$1.00 PER ANNUM, IN ADVANCE; 2 Copies for \$1.90; 3 for \$2.75; 5 for \$4.00; 10 or more, 75 cts. each. Single number, 5 cts. Additions to clubs may be made at club rates. Above are all to be sent to ONE POSTOFFICE.

*Established in 1873.*

PUBLISHED SEMI-MONTHLY BY

*A. I. ROOT, MEDINA, OHIO.*

Clubs to different postoffices, NOT LESS than 90 cts. each. Sent postpaid in the U. S. and Canada. To all other countries of the Universal Postal Union, 18 cts. per year extra. To all countries not of the U. P. U., 42 cts. per year extra.

## OUT-APIARIES NO. XI.

### SHUTTING UP BEES, AND HAULING.

**I**F it is necessary to fasten frames in the hive, it may be done any day previous to the hauling. I prefer to do it when bees are flying. All the other fastening may be done any time beforehand, except the shutting-up of the entrance. That should not be done sooner than the evening before the hauling, after the bees have stopped flying for the day. If you are up early enough, you can fasten them up in the morning of the day when you haul them. If it is tolerably cool, or if your bees are very quiet, and you are very careful, you may be able to shut them in without using any means to quiet them. Move softly, for once aroused it will take some time for them to settle down. A little smoke will drive them back so you can imprison them. Very little is enough, for I suspect that the application of smoke, when bees can not fly immediately afterward, does them no good, to say the least. Lately I use water instead of smoke. I don't think the water does any harm, and I suspect they are often the better for it. Take a pail of water, and, with a dipper, dash about a pint into the entrance, not all at one dash, but so it shall be wet in all parts. That seems to leave the entrance clear of bees, and on the whole I like it better than smoke.

If you expect to haul more than one load in a day they must all be shut up before they start to fly in the morning. If water be used at the final shutting-up, I think it is just as well for the bees to be shut up at night as in the morning. They don't find out they are fastened in through the night, and so don't worry. You may fasten them up in the evening, and haul them the same evening. If the weather is cool they will stop flying quite early in the afternoon, giving you time to make most of the

journey before dark. Before putting a hive on the wagon, give it a searching examination to make sure there is no crack anywhere that a bee can get through. You will do well to use no very old hives for hauling; still, you may be obliged to use them, and special pains must be taken to see that there is no danger of bees getting out on the way. Plug up carefully with old soft rags any spot that you think is about half big enough for a bee to crawl through. Let me suggest, if I have not done so before, that you must be very careful not to have bees get out on the way. Look all over the top of the hive; examine closely the front, the back, each side; tilt the hive on end, and scrutinize the bottom. Don't be fool enough to hitch your horse in the wagon before your load is on. Let every thing be in readiness to start the minute the horse is hitched on. Have hammer and nails along, ready for emergency. Take a lighted smoker with you, and be ready to have every third man you meet tell you your load is on fire. After you have had experience enough, it is possible you may not keep the smoker burning, but don't try it too soon.

When I use two teams at a time, both wagons are loaded before either team is hitched on, then both teams are attached. I mount one wagon, my assistant the other, and off we go, keeping within hailing distance of each other. If bees are flying when we start, it may be necessary to haul the wagon a little distance by hand before hitching on, so that the bees may not annoy the horses. For some time after starting, if the bees are flying it makes me very nervous to have loose bees flying along, following the wagon, for I am never sure that none of them are getting out of the hives on the wagon. I heave a sigh of relief when the last one disappears. During my first experience in hauling, one day I was going along very quietly, when all at once a number of bees were flying

about the wagon. Before I had time to examine the hives thoroughly it occurred to me that we were passing by a large maple-tree in full bloom, and the smell or the noise of the bees in the hives attracted the attention of the bees that came to the tree. The same thing has occurred many times since, also in passing other hives near the roadside.

In hauling bees after night, there is, I think, no danger of horses being stung; but if there should happen to be a leak in a hive anywhere near where you are sitting, it is not pleasant to have the bees crawling over you, and possibly stinging you, for you can't very well do any thing but drive straight along, unless you prefer to get off and walk. If your road is smooth you can jog along on a trot. Have your horse hitched up tight; that is, so that when he is standing still he can not move a step backward or forward without the wagon going with him. Then if you come to a bridge which is bad at the jumping-off end you can stop your horse and ease down the wagon off the bridge. It is hardly necessary for me to say, that all hives should be loaded on so the frames shall be *across* the wagon, not lengthwise. C. C. MILLER.

Marengo, Ill.

Every thing you say, friend M., reminds me vividly of my trials when I used to draw bees on the one-horse wagon; and I assent to every point you make, with the exception of the closing one. I would assuredly have the frames run *lengthwise* of the wagon; for if they didn't, when you undertake to ease the wagon down from that bridge you mention you would bump the heavy combs out of the frames. Haven't you made a mistake?

#### AMONG THE BEE-KEEPERS OF VERMONT.

MR. MANUM AT HOME.

**E**ARLY one morning last August the writer boarded the White Mountain express and left Little Rhody, with her extensive and diversified manufactories, with the purpose of gratifying a long-cherished desire to visit the principal Vermont honey-producers. We were hurried up the valley of the Blackstone, past the numerous factory towns and hamlets into Worcester, then away toward the northern hills, across Massachusetts, through the level country between Gardiner, Winchendon, and Keene, from which grand old Monadnock towers up alone out of the apparent level, with its peaked summit piercing the clouds.

As we crossed one corner of New Hampshire and neared Bellows Falls, the scenery was more mountainous, and the road ran along the hillside above fertile-looking valleys, and soon the noble Connecticut River came to view, its waters flowing peacefully through the wide valley after its rush and leap at Bellows Falls. At the Falls this great volume of water rushes through the crooks and turns of a narrow channel worn in the rock, and, whirling and boiling, tumbles over the ledge into the wide bed below. Owing to there being less water than usual, its roar was not as deafening as at the time of former visits. Here log-drivers are a familiar sight, and in the season do some of their most dangerous work.

Near the Falls is the junction of several railroads,

and at the depot restaurant we took the usual hurried lunch. The extensive works of the Vermont Farm Machine Co. are located here in the town, as well as prosperous paper-mills. At the freight depot men were weighing loads of wood pulp, thick sheets right from the mill, and still wet.

At Bellows Falls we parted with the White Mountain travelers, whose route followed the Connecticut up through White River junction, while ours was through Rutland toward Burlington. Along the route the hills were higher, and the road ran first on one side of the valley then on the other, while the blue outlines of the Green Mountains were to be seen on the east. The road ascends all the way to Rutland, and we were conscious of a different air and altitude. Before reaching there we occasionally noticed small apiaries, and at East Wallingford we had a passing view of an apiary of about 50 colonies below the railroad. Their keeper was evidently standing over an open hive, while hive-cover and sections were lying near. Rutland was reached about 2 o'clock, but we soon left this fine town and important railroad center, and soon were speeding away through the towns bordering on Lake Champlain. Off at the west, beyond the lake, which was hidden, the dim blue outlines of the Adirondack peaks were plainly visible, while at the right the Green Mountain range towered up abruptly, and reached as far as could be seen north and south.

After passing the marble-quarries for which Rutland is celebrated, and when near the station of Proctor, we saw another apiary of 40 colonies or more, and learned that in the vicinity were two others of 50 or 60 colonies, and at Brandon a yard of 100 colonies.

We passed through the beautiful town of Middlebury, the home of Mr. J. E. Crane, a leading bee-master of the State, but I did not stop, leaving that for our return trip. In the woods along the river we noticed that large white-poplar trees were numerous, and realized that we were near the home of the white-poplar section and shipping-trade.

At New Haven we took a stage to Bristol, 5½ miles away to the east, and at the foot of the Green Mountains. Here is the home of Mr. Manum, which, in response to a cordial invitation, we had chosen as our first destination. Not knowing the day we were coming, he was at an out-apiary which he had commenced to move to a new location. We were cordially welcomed by his wife, whom we found to be a genial hostess, and not only interested in but well posted on the affairs of the apiary.

The time passed quickly, and before dark Mr. Manum and assistant drove up, each with a load of outer cases compactly piled and securely tied together with numerous ropes.

We soon had the pleasure of conversing with one whose extensive bee-operations prepared us to appreciate the privilege. We found him very genial, a free talker, ready to give any information he possessed, also ready to see the value of and quick to adopt any good thing advanced by others. He says he has no secrets to withhold, and considers it a duty to make public any information he possesses, and has written many long letters explaining his methods to many in various parts of the country, free of charge, but admitted this was too much of a tax on time and strength. We can testify that he has done this for us in the past, for which we are very grateful.



He is a medium-sized man, dark complexion, with no spare flesh, but very active and energetic. His eyes are small and black, and light up pleasantly in conversation.

We had a bee-convention by ourselves; and when I recall the number of nights which we sat and talked until midnight, and think of his family, I still have twinges of conscience. Mr. Manum's house is on the main street, near the mountains, which here tower up abruptly to a great height, and are covered with foliage to their very tops—*green* mountains indeed. Back of the house is the work-shop, and honey-house and stables, which we inspected the next morning. Here are the headquarters from which loads of supplies prepared in winter are sent to the out-yards, and where the honey is cleaned, graded, and stored. The sections are cleaned by women and girls, and separated into four grades. Those combs, the most perfect and white, are marked "Snowflake;" those full and white, "Green Mountain;" fair and good weight, "Comb Honey;" and the fourth, "Light Weight." Wooden sides are used entirely instead of glass, and are fastened on with strips of paper. Crates take 20 sections,

The top-bars of his frames hang on strap-iron rests, or rabbets, and do not touch the hive at the ends by a quarter of an inch; this prevents their being glued down. To keep them from swinging when moved, a quarter-inch strip, as wide as the rabbet is deep, with small blocks nailed on at the right distance apart, is crowded down into the rabbet at each end, and another is tacked across the bottom, which keeps all as snug and firm as closed-end frames. He has two rigs for carting bees; the single team takes 23, and the double team 50 hives. One tier is set on the wagon-bottom, then a rack put in that stands three or four inches above them, on which is placed another tier containing two additional hives. The thumb-screws are then turned up to bring the wagon-body firmly together.

After a pleasant ride of 5 miles along the mountain stream with its varied scenery, and during which time we gained much information from our companion, he turned into a farm-yard and drove up the hill, where were more rows of hives with a honey-house near by. Here the bees had not done as well as elsewhere, and were to be taken to a better location in the valley north of Bristol. Soon all hands were lifting frames of bees out of hives and



MR. MANUM AND HIS HOME APIARY.

Back of the honey-house, beneath the branches of a small orchard, was the "Home" apiary. Nearly all colonies were in chaff hives, numbered and arranged in long rows; there were also many nucleus hives containing surplus queens, and near by a long row of the Chapman honey-plant, most of it out of bloom, but a few balls were in flower.

We had urged him to continue the moving, and allow us to accompany him; so after looking through the home yard we started for the Lincoln apiary, to bring back a load of bees. Another team had preceded us to get a load of outer cases. One wagon was filled with empty hives, made with permanent bottom for shipping. The bottom and sides were of light boards and a sheet of muslin; one edge permanently attached served for a cover. In the ends of boxes were auger-holes covered with wire cloth.

putting them into shipping-boxes; queens were generally found, and covers marked accordingly. Strong colonies were divided into two parts, for fear of smothering. Bees were cross, and smoke was hardly protection enough. They were bothered some; but as we always have our veil handy, we were all right, and felt more than ever satisfied that we did not care to entirely dispense with a veil.

The muslin cover was tacked down all around, and the wagon loaded. The cleats on two sides of each hive kept them from rubbing each other or the wagon-body, and saved the covers from wearing through. The horses had been taken out of the shafts, and tied at a distance. When loads were ready, one mounted the wagon, the other two hitched in the horse, threw up the reins, and they were off at once. We reached Bristol all right, but

it was evident that the bees were needing more air; so instead of leaving them on the load they were taken off and allowed to fly. Rims were then made and covered with wire cloth, and used in place of muslin to finish the trip, and with the remainder. He usually makes new apiaries in the spring when bees are few, or when it is cooler in the fall, then the muslin works all right.

Three horses are used during the season, and occasionally extra ones hired.

There are seven out-yards,  $2\frac{1}{2}$  to 16 miles from the home apiary, and through the swarming and honey season a man is kept in each. There are about 700 colonies in all, and he intends to leave 125 in a yard every fall. This number insures, after making nucleus colonies, at least 100 good strong working stocks ready for the honey-flow.

Pawtucket, R. I.

SAMUEL CUSHMAN.

*To be continued.*

## MANUM IN THE APIARY WITH HIS MEN.

### HOW TO SAVE LABOR AND TIME IN MANIPULATING HIVES.

**J**ULY 18.—“What are you looking after, Will?”  
“I am trying to find this queen. She is two years old, and I want to supersede her with a young one, as you told me the other day to remove all two and three year old queens and introduce young ones in their place. I have now a number of fine ones just commencing to lay, and more queen-cells coming on to take the place of the young queens in the nuclei. I have looked through the hive twice, but I can't find this old queen, there are so many bees in the way.”

“Well, just close the hive, and allow them to quiet down for a few moments, and then we will try to find her. Never keep a hive open too long; it is better, after looking a while, to close the hive for an hour, and then try again.”

“While we are waiting, Mr. Manum, I wish you would look at No. 10. I have tried three or four times to introduce a queen in that hive, and have failed each time. They ball her as soon as liberated, and I don't wish to lose any more queens by that colony.”

“How long have they been queenless? Can you tell?”

“By the record, 17 days; and I have kept the queen-cells cut out, as I wished to give them a laying queen; but I have failed in that, and they have nothing now but sealed brood.”

“We sometimes have such obstinate colonies, and it is not many years since I hit upon a plan to make them accept a queen. Have you any virgin queens?”

“Yes, several.”

### HOW TO MAKE AN OBSTINATE COLONY ACCEPT A VIRGIN QUEEN.

“Very well; you may cage one and bring her here. There, I will now shake all of these bees on to the ground, in front of the hive, say two feet from the entrance—there, so. Now, this last comb I will shake near the hive, so that the bees that are on it will attract the others to the hive. Now, when they get well to running into the hive, just let the virgin queen run in with them, and the job is done. I have found that a colony in this condition will accept a virgin queen when they will not one that

is fertile. Another way I have succeeded in making such a colony accept a queen is to take out three of their combs and give them a good nucleus having a laying queen, by setting the combs, bees, and queen, from the nucleus at one end of the hive, where I take out the three combs. This should be done very carefully, not to excite the bees either from the nucleus or those in the hive. It is a good plan, when uniting in this way, to drop a few drops of essence of peppermint on the bottom of the hive.”

### HOW TO FIND A QUEEN IN A POPULOUS COLONY, WITHOUT LIFTING OUT ALL THE COMBS.

“We will now return to hive No. 10, where you failed to find the queen, and I will try to find her for you. Now watch and see how I look for queens when that is all I am after. There, I first remove the comb nearest to me and set it against the hive near the entrance, after first looking it over for the queen. Now I cast my eye over the side nearest to me, of the next comb, and carefully move it toward me to the side of the hive in the place of the first comb. I raise it barely enough to move it; at the same time, I look for the queen on the side of the third comb which is in sight, by the removal of the second comb, and at once look on the opposite side from me of the second comb, and then raise the third comb and set that in place of the second, and quickly look at the side of the fourth, and so on through the hive until she is seen on one of the combs, when it is quickly raised, and the queen removed. I can find queens in this way much quicker than by lifting the combs out of the hive; but if I do not find her when going through the hive in this way, when returning I lift out each comb and look it over carefully until she is found, or the combs all looked over and placed back where they belong, when, if she is not then found, I close the hive for a short time, as I told you to do with this one. There she is on the fifth comb. Now look at her before I lift out the comb, and see how plainly they can be seen in this way.

“Here is another thing I want you to observe; that is, that *queens have red legs*; that is, the lower half of their legs is a dark brownish red, while drones and workers all have black legs. This fact will sometimes help you to find a queen where the bees are very thick, and cluster over her; so then, when you see a bee with red legs you may know it is a queen.

“She is a nice queen, and it seems too bad to discard such a fine one as she is; but she must go. I would rather have young ones to carry a swarm through the spring. Now, just at night you may give them another queen.”

A. E. MANUM.

Bristol, Vt.

Very good, friend M. I have practiced exactly the plan you speak of for finding queens, although it never occurred to me to put it in print; and I have used that same plan when some one else had tried and failed before. I have never noticed that the legs of a queen were of a different color from those of the other bees, but I have discovered that I can detect a queen a great many times by getting a glimpse of her legs, especially when she is under a clump of bees, when I could not otherwise. And since you speak of it, I think there is a shade of difference in color. Sometimes I got just a glimpse of her long striding legs, and then



they would be lost; but I felt so certain that the legs belonged to a queen, and nothing else, that I kept my eyes on the same spot, or nearly there, and eventually I would find her. I am much obliged to you for reminding me of this matter. Now, I believe that, if the queen I was hunting for to replace should prove to be a fine large one I would let her alone. Very likely, however, it would be a mistake. I can not quite see why any colony should receive a virgin queen when they would not receive a laying one—that is, unless they have already a queen of some sort. In that case they might neglect to notice the virgin queen, where there would very soon be a hubbub were we to put in a laying queen. I believe I have always succeeded in getting any colony to accept a queen by simply taking all their combs away, and leaving them clustered on the side of the hive, without any combs at all, say for from ten to twelve hours.

### IMPORTED QUEENS AS HONEY QUEENS.

HOW TO MAKE SELECTED HONEY QUEENS DUPLICATE THEIR QUALITIES IN OTHER QUEENS.

**O**CCASIONALLY there is found one of those queens (see p. 508, June 15) that will produce workers better than the average, and there are two very strong chances to run in breeding from these abnormal freaks of nature. The chances are, the strong tendency of perpetuation of either an establishment of the peculiarity or of the direct reverse. These peculiarities are occasionally found in every thing, and the best way is to test the reproductive tendency, and by in-breeding establish it. I knew of such a case happening among half a dozen imported queens obtained from the Home of the Honey-bees in 1882. The queen was dark, small, and inferior-looking. Her workers were dark leather color, very large and long in the abdomen, and heavy-winged. They were gentle in the extreme, and rather lazy in their actions. But they just lugged in the honey. Now, the law, as a rule, is to show characteristics mostly in the alternate generations; and to dispose of that alternation, this plan was resorted to, that proved true: Queens were raised in abundance from her, and a whole apiary of 30 colonies were queened with them; drone-combs were inserted in the hives of those queens mostly resembling their mother's workers in general characteristics. The queens that raised the most even drones were then given an abundance of drone-comb, and it was excluded from the other hives, and the drones all trapped off that were in the apiary. More queens were raised late in the fall, and were mated with these drones, because there were no others permitted to come out of the cells. In 1883 these queens showed the characteristics in their workers that were in those of the old queen; and from these young queens another set were raised to be used as drone-breeders, to raise drones, for mating with the old queen's daughters which showed the result, and the daughters from other strains were brought to the mating apiary to further test the results, which proved to be continually becoming more established; and I know where there are hives to-day that have queens containing a tincture of that blood which was sur-

prisingly apparent during the two very poor seasons of 1887 and '8. Neighbor H. had better stock one apiary with queens for drone-raisers from that best queen, and use her for a second-generation breeder.

H. L. JEFFREY.

New Milford, Ct., June 29.

### FALSE STATEMENTS IN REGARD TO THE HONEY BUSINESS OF OUR COUNTRY.

As a protection to our bee-keeping population, we propose in this department to publish the names of newspapers that persist in publishing false statements in regard to the purity of honey which we as bee-keepers put on the market.

#### MORE WONDERFUL STILL.

**I** THINK I have before mentioned that we send GLEANINGS to the pastor of our church. Although we are so unfortunate as to change pastors quite often, somehow it does not seem to take very long for a minister and me to get acquainted, and to become very intimate friends. As a matter of course, he takes GLEANINGS. I think I have mentioned that our last pastor was called back to China. Our new one is quite a young man; but for all that, when he read that passage in our last journal, asking all the bee-friends to go right to work and look over cyclopedias, he pulled his down from the shelf, and what do you think he found? Well, right here it is below:

*Dear Brother Root:*—In accordance with your suggestion in GLEANINGS for July 1, I consulted the *American Cyclopaedia* on the subject of artificial honey. In the body of the work, under the article "Glucose," we are referred to the Supplement; namely, the *Annual Cyclopaedia*. In the Annual for 1881 (Vol. VI. of the New Series), under article "Glucose," p. 351, column D, line 25, I find this statement: "Glucose is very extensively fed to bees, which eat it with great avidity, and store it away unchanged as honey. It is also put up directly in trade, as honey—with which bees have had nothing to do—being put up by means of appropriate machinery into artificial combs made of paraffine." As Messrs. D. Appleton & Co., publishers of the above, issue a supplement every year, I hope you can secure a retraction in the issue of 1889.

Medina, Ohio, July 3, 1889.

NORMAN PLASS.

Now, the astonishing part is, the statement above has been *eight* years before the American people—in fact, in the *American Cyclopaedia*; and yet with all our zeal to hunt up newspaper editors and take them to task, not one of us has in all these years found the above scandalous and ridiculous statement. I presume the publishers of cyclopedias pay the men who write up a special subject for them a good price for so doing, and these men are supposed to obtain their facts from actual practice. Suppose a man should be employed to write up the subject of brick-making for a cyclopaedia; and instead of going to a brick-yard and spending several days and weeks in watching the workmen, and talking with the proprietor, he should simply hunt over newspapers and talk gossip with people who had never been in a brick-yard in their lives. Well, it is just what they have been doing on the subject of bee culture. A man was

procured to write up the subject of glucose. Instead of going to a glucose-factory, or consulting a manufacturer, or even a workman, he goes and gives for a cyclopedia the above absurd piece of newspaper gossip and scandal. If this is the way they do things, the makers of cyclopedias, the publishers and agents should be told, when they come around with their books, "No, thank you. When we can find a cyclopedia that gives us facts obtained from real practical work, we are ready to invest; but no book shall find a place in our families for our children to read, that retails falsehood and scandal like the glucose story."

### BEEES FOR BEAUTY OR BEEES FOR BUSINESS—WHICH?

SOME VERY PERTINENT SUGGESTIONS.

**I**N the selection of queens for breeding purposes, should there not be less stress put on those producing workers having three or more yellow bands, that we have been told so often are the distinctive markings of *pure Italians*, and more be said about *pure Italians* that have that peculiar vim that indicates business in the hive and field? There has of late been much said about such very bright workers and red-headed drones, that many might be led to believe that only bees possessing those characteristics would be of any benefit to any one contemplating the keeping of bees. The question seems to be whether to breed for beauty and gentleness, or for utility and as much gentleness as we can. As the result of several years of breeding for beauty and gentleness, we find that, in nearly all cases, where we have a colony that are beauties and need no smoke when we manipulate, that these same bees are far behind some of their less showy and darker neighbors. Of course, there are exceptions, and we find that occasionally there will be bees combining all three requisites; viz., color, gentleness, and excellent honey-gatherers; but when we breed from queens producing such bees, they almost universally fail to reproduce all those requisites; therefore we have come to the conclusion that, from a financial standpoint, it is very nearly impracticable to breed such ideal bees; while, on the other hand, we can quite easily breed a strain of *pure Italians* that do not have any distinctive marking, yet they are hardy and great workers, and it would do a man's heart good to see them dropping away in front of their hives and finishing the rest of their journey on foot; and when we look into their hive they make one say, "By their works ye shall know them."

Risking the treading on some queen-breeder's toes, we will say, that, generally, these beautiful golden yellow bees are the "dudes" in beedom. Some of our largest honey-producers repudiate these same light-colored bees, and some have decided that a cross between dark *Italians* and the brown bees produces a strain possessing more good points than any race in their purity; but we have a very strong opinion that a strain of dark leather-colored *Italians* can successfully compete with any bee on earth, and in all points. If we are wrong, we have the consolation of knowing that we are not alone, and that hundreds stand ready to be convinced of their error, if error it is. Who is there that is trying to make his bread and butter by

the production of honey, that cares whether his bees show beauty or not? Stings are to be expected; and if a colony of bees have stamina enough to fill their hive and supers with honey, they will try to protect it. Judgment must be used in handling bees, as *all times* is not always the *right time*; and this fact should be borne in mind when people wish to peep into their hives, or take off honey; if they will, there will not be so many wishing for bees showing a more gentle and loving disposition.

Rochester, O.

M. W. SHEPHERD.

### CARING FOR COMB HONEY.

SOME SEASONABLE HINTS FROM G. M. DOOLITTLE.

**A**S the time is near at hand when the main crop of white honey in sections will be taken from the hives, I thought that a few words relative to the care of it might not be out of place. Next to getting plenty of comb honey in sections, is the care of it. Many seem to suppose that the producing part is about all there is to any branch of business which supplies our markets with merchandise. How often we find butter, wool, maple sugar, meat, etc., taken to market in such poor shape that they do not bring as much, within 20 per cent, as goods of no better quality are selling for, where the producer understands that the placing of his product upon the market in attractive shape has much to do with the value thereof. It is said of a certain strawberry grower, who always produces very fine berries, and puts them on the market all fresh and nice, that he always finds a ready sale for his berries at a very high figure, while those of shiftless producers spoil on the markets without a purchaser. Thus he obtains more money for his few rows of choice fruit put upon the market in attractive shape, than is obtained from as many acres grown in a slipshod manner, and put on the market in an unattractive way. Honey is no exception to this rule, unless it is that the difference is still greater than on most other productions. Hence, to place our honey upon the market in the best possible shape should be the aim of every bee-keeper in the land. My aim has always been, not only to get the honey off the hives before it was soiled by the bees, but also to keep the combs as nice and perfect till they are placed upon the market as they were when first taken from the hive. This is no easy task; for from the first, honey is liable to accidents which, if they occur, soon reduce the price from that of a No. 1 article down to that of second or third quality. I once hired a man to help me remove honey from the hive, as I was nearly sick and unable to keep even with my work as I desired to; but after his working with me half a day I so improved in health that his assistance was no longer necessary. He would manage to get his fingers against the honey, so as to break the nice cappings to about every other box, in spite of all I could say or do; and if he did not do that he would get the corner of one box into the face side of the comb in some of the other boxes, till I actually believe I paid him 75 cents for doing me \$10 damage. Where a person is naturally sensitive, and wants things nice, as they always should be, such proceedings will cure a slight sickness quicker than a physician can. I give this illustration only to impress on the mind of the reader that the utmost care is necessary at all times



when handling section honey, so that it may be kept in its virgin purity if we would command the best prices in market, and not injure the same for some one else.

The lack of care is one great cause of the ruinous prices we are often obliged to take in the markets. Mr. A. takes his honey to market after it has stood on the hive till it is dingy with the soil of the bees traveling over it, and it is often put up in boxes or cases having a slovenly appearance, with a determination to sell it for what it will bring, which is often not enough to cover the cost of production of white honey. Mr. B. goes a few days after, with his snow-white combs put up in handsome cases, and finds he has to compete with A's in price, or not sell at all, as the parties having A's honey know if B's is put alongside of A's they can not sell a pound of A's till all of B's is disposed of; and thus the price paid for A's honey is used as a leverage to bring all honey down to that figure. These things ought not so to be, nor would they be if all would read our bee-papers, and not only try to see how nice they could put up their honey, but also try and not injure the market for some one else, thereby doing by others as they would have others do by them.

The first requisite in caring for our honey after it is taken from the hive is a warm room in which to store it; one that has a free circulation of air all about it as well as to be warm. Years ago it used to be the custom to store honey in the cellar to keep it cool, but I believe that all of our practical bee-keepers of to-day prefer a warm room to a cool one, on account of the honey sweating, or taking on dampness in a cool room, thus giving it a watery appearance. If left for a great length of time in such a place, the honey will often become so damp and thin as to burst the sealing, leaking badly, and souring so as to nearly ruin it. To secure a free circulation of air, as honey will take on dampness even in a warm room if the air is partially excluded from it, build a platform of scantling a foot from the floor, and six inches out from the wall, upon which to pile the filled sections, keeping them in the same position they occupied while standing on the hive. On warm days raise the windows on either side of the room, so as to admit all the fresh air possible; and as it comes toward evening, close them again. To prevent robbers coming in and also to let the few bees that may come in on the honey get out, cover the window (tacking it to the outside casing) with wire cloth, letting it go above the casing nearly two feet at the top, and keeping it out from the building half an inch or so by means of strips of that thickness tacked to the outside of the building. Examine the honey occasionally to see if the larvæ of the wax-moth are troubling it; and if so, fumigate it with burning sulphur. If you are careful not to get any sections having pollen in them in the main pile, it will be a rare thing that the honey will need sulphuring. Kept in this way our honey is always holding its own, or, if any thing, growing better; and if properly crated and put upon the market at the right time it will command the highest price, and you will feel a pleasure in the matter, never enjoyed by any one who does things in a slipshod manner. G. M. DOOLITTLE.

Borodino, N. Y., July 3, 1889.

Friend D., I am almost glad you have had experience with one of these individuals who will stick their fingers into nice sec-

tions of comb honey, or punch another section into it, or, in short, do every thing but the right thing. Nobody knows the real luxury of having a trained and experienced hand about him until he has tried working with the average run of people who are round hunting for a job. Now, it is a little funny that this individual didn't complain because you didn't pay him as much money as you did somebody else, or perhaps as you could afford to pay an experienced hand. I am sometimes tempted to lose charity for all humanity when I see people so fearfully awkward, and then indifferent about it afterward. Had this individual of whom you speak said to you, "Neighbor D., you are setting me at something I never did before, and something in which I have had no experience; I really fear that I have been more trouble to you than I am worth; and if you will let me stop right where I am there shall not be any charge for what I have done. Nevertheless, if you wish me to go on I will try to see if I can not do a little better," all would have been well. Where I find people ready to speak out and show the spirit of something like what I have just quoted, it makes me feel hopeful. But where they do not say a word, and never offer to pay for the mischief they have made, it gives me a very sorrowful feeling, and I lie down at night weighed down by the fear that thousands upon thousands will *still* be without employment as long as the world lasts. You see, you have unconsciously touched upon the absorbing topic of my life—WHAT TO DO. Now, then, to the great wide world of working people, I want to say that friend Doolittle has, in his little sketch, told exactly *why* many of you are without work, and why you do not get *better* pay than you are getting now. It is because you do not enter heart and soul into the work that lies before you, and fall in line with your employer's thoughts and ideas, and try to save his property, and *help* him to get a good price for his product instead of helping to make it unsalable. "Whatsoever thy hand findeth to do, do it with thy might." Yes, one word more: I do not wonder that you got well, old friend. My health improved once amazingly in a very short space of time, when I found one of the boys *digging up* a crop (just planted) with a *cultivator*. And here comes in another moral: I am sure we often imagine we are sick, especially during hot weather, when the truth is we simply want *stirring up* and *shaking up*.

#### VANDEUSEN REVERSIBLE FRAME, AGAIN.

1½-INCH SPACING PREFERRED TO 1¼ INCH.

I HAVE read Z. T. Hawk's article, page 513. In your foot-notes you say that 1½ is too close spacing for frames; that in reversing, changing ends, or changing from hive to hive, they will not match. Now, I do not count my hives by the hundreds, but I have known what it was to have the care of 300 hives per year, and not less than 175 any one year for the past 11 years, and I have handled those 1½-wide end-bar frames, and

they were reversible, by the hundreds, for the past 8 years, and I have yet to find that trouble of not being able to change them from hive to hive, end for end, and from bottom to top. I did find plenty of trouble with all that were  $1\frac{1}{2}$  inches wide, and, as Mr. Hawk says, there is an invitation to elongate the cells for honey with the  $1\frac{1}{2}$ -wide end-bar. Before reversing-wires came into common use I let my top and bottom bar project  $\frac{3}{4}$  at each end; rabbets were used at the top and bottom that were detachable, the hive being reversible as well as the separate frame, making a space above and below the frames. A reversible frame without a wide end-bar loses half its worth, not only with me but with many others. The space at the ends of the frames is worth as much for its winter benefit in preventing frost at each end of the hive as it is worth for moving the hives from apiary to apiary, or from stand to stand; the same projecting arm, and  $1\frac{1}{2}$ -wide end-bars has been the main feature of the shallow hives with frame of inside measure of  $4\frac{5}{8} \times 17\frac{1}{2}$ , and double rabbets that were taken from the half-story surplus frame of J. H. Nellis, in 1878. Several of us tried the  $1\frac{1}{2}$  wide brood-frame for several seasons, and the  $1\frac{1}{2}$ -wide side by side, and the troubles that disgusted us with the  $1\frac{1}{2}$  frame were not found in the  $1\frac{1}{2}$  frames. The first  $1\frac{1}{2}$  lot of frames were made by accident; and when they chanced to come together they set us to thinking about the difference between them. I know of six apiaries where the  $1\frac{1}{2}$  frames are used, and not one will take a frame  $1\frac{1}{2}$  wide, and they would be thrown at you if you gave them to the apiarists. With the shallow  $4\frac{5}{8}$  frames, inside measure, the  $1\frac{1}{2}$  frame is too wide positively. There are 5 apiaries that I know of where both the wide and narrow end-bars are in use, and I know what their owners say; it is, "Give me the  $1\frac{1}{2}$  frame every time." Some of them have been in use for eleven years, and the  $1\frac{1}{2}$  frames have been planed down to  $1\frac{1}{2}$  wide; but this much I am forced to say by practical use, and from years of use too—give me the  $4\frac{5}{8}$  deep frame, 2 stories high. I am aware that there are twice as many frames to handle separately, and that it is twice the work to make them up; that they cost more; but when I can handle five hives of two stories each, in the same time that I can handle three that are of the L. frame depth, it will pay the difference in one season; then there is one point that was shown to me ten years ago this summer: Split the brood-chamber of an obstinate colony in two, and place your crate between them, filled with boxes full of full sheets of fdn., and your fdn. will quite often change shape before morning.

But here I must mention one point in reversing frames that several years' practice has shown positively true. If half the frames, that is, if alternate frames are reversed, the honey is more sure to be removed than if the whole are reversed, which is an objection to the reversing of a deep frame, and this same object is again shown in another form by changing places with the shallow frame-cases. The honey in the upper half of the top case is placed between the brood, which is an objection to the bees, and up to the sections it goes; and in the spring again it tells in building up colonies: reverse alternate frames, and the queen will surprise you with the increase of brood; and likewise by changing places with the shallow frame-cases, the empty space, like the honey, is brought between the brood. These things have been tried all

through the eighties by more than myself, and the reversing alternate frame has shown the difference here in the Grove Street apiary, and those of our near neighbors here in New Milford. We have whole cases of sections full of honey and capping, while our neighbors all around us are saying, "My bees are doing nothing." Our full cases that are capping are counted by the dozens, and there are only 75 hives in this apiary. The deep frame, when the whole set are reversed, will quite often cause the brood-chamber to be completely packed with honey, when, if alternate combs are reversed, it in all cases brings honey between the brood top and bottom of the frames. The bees don't like it that way, so they move it.

H. L. JEFFREY.

New Milford, Ct., June 19, 1889.

Thanks, friend Jeffrey. I (Ernest) am quite sure you are right in regard to the  $1\frac{1}{2}$  versus  $1\frac{1}{2}$  inch spacing. I have been watching this very same thing very closely myself, and my observations confirm all you say with respect to it. I have noticed, over and over again, that even suspended frames, when spaced  $1\frac{1}{2}$  inches from center to center, are bulged and distorted, generally, when the same frames spaced  $1\frac{1}{2}$  are nice and even. The  $1\frac{1}{2}$ -inch spacing, on account of the irregularity from bulging and bur-combs, makes it inconvenient, oftentimes, to change the relative position of some of the combs in the brood-nest. The bulged surfaces will often come together, and sometimes two concave surfaces. With the  $1\frac{1}{2}$ -inch spacing, these difficulties, as you say, are scarcely noticeable. In regard to inserting the super between the two brood-cases, I will say that I have been trying that very same thing, with the Heddon hive. I *expected* that the bees would start filling out the foundation immediately. Although the colony is a fairly strong one, ten days have elapsed, and yet they have only just begun to work on the foundation. Here was an instance where theory seemed to be strangely at variance with practice. I can not understand it, because it seems strange that, with the brood on both sides, the bees should not connect the two with honey, especially when the queen herself is kept in the lower section by a queen-excluding honey-board. I feel almost sure that further trials will make theory and practice coincide. You intimate in your article that you have been using divisible brood-chambers clear through the eighties. You speak of using shallow frames made by J. H. Nellis in 1878. You have told us just enough about it to make us want to know more about it. It is pretty evident that you are an advocate of a shallow brood-frame; and as you have used them for a good many years, your experience might be interesting to the readers of this journal.—You say that a reversible frame, without an end-bar, loses half its worth, on account of its advantages for wintering. If colonies are wintered in the double-walled chaff hives, or single walls in the repository, it seems to me the closed uprights would not make any material difference in wintering. The Vandusen metal corners are giving most excellent satisfaction here. The end-bars of these are not closed, and no gumming together.



## BEE CULTURE AT JAFFA, SYRIA.

SOMETHING FURTHER FROM FRIEND BALDENSPERGER.

SOME years back I tried tobacco smoke on a very vicious colony of Cyprio-Syrians. I could subdue them with nothing, being dreadfully stung. I smoked them *ad infinitum*, and was astonished to find them tumbling over and over at the bottom of the hive. I succeeded in subduing them. I did the same to a very vicious colony of Syrians soon afterward, but never tried it again, as I had no occasion for it. Very vicious ones are either discarded or else worked in just the time of day convenient. I think during the hottest hours of the day no robbery is going on; and the gentlest way a man can handle them is to use plenty of smoke to begin with before opening the hive. Tobacco smoke is the only remedy I know of to get down the *braula cæca*, which is often met with on bees. A queen-bee having often a number of these parasites, I pick up the queen by the wings and give her two or three puffs, and the little fellows will tumble down dead. Picking them off with pincers is very trying, as the animal does not keep quiet for a moment, but rushes about, the body particularly, when disturbed; the smoke does not injure the queen. Tobacco-blossoms also give honey, which has a slight taste of tobacco. I think the habit of smoking bees with tobacco originated with pipe-smokers (in Germany), as it is very easy for a tobacco-smoker to light his pipe, give a few puffs, and continue the use of his smoker at his pleasure. In Palestine tobacco is used very extensively, in cigarettes, pipes, and the well-known hubble-bubble, the arjelah, or water-pipe. A water-bottle has a stem of copper fitted to it with three openings—one in the water, one at the head where the tobacco is put, and one in the empty space above the water. The smoke, being drawn through the water, gets purified, and continues its long way through the various-colored leather tube, corded with silver wire, having a length of several feet, into the mouth. Bee-keepers here never use tobacco-smoke for their bees. Horse or cow manure is the only fuel for smoking the bees, through an old water-jar, having a small hole at the bottom. The smoke is blown by the mouth—a difficult process. How thankful should we be to Mr. Quinby for giving us such a comfortable smoker! In bee-keeping for women, Mrs. B. supposes it quite work enough to do the necessities without looking for the pleasure of carrying them about for fun, as Mrs. Chaddock tells us. My wife generally holds the smoker while I handle the bees or shake them off for the honey, which I put in empty hives on a wheelbarrow beside me, which, though very clumsy in comparison to the one you advertise, still does the business well, taking four hives with 18 frames each. As soon as extracted, the empty frames are brought back and distributed, if possible, before sunset, as experience has taught many a bee-keeper never to handle bees after that. Robbers don't trouble us as long as honey is coming from the flowers; but as soon as the honey-flow is over, they are a trouble, it being impossible to work more than an hour at a time; then we stop again till they are dispersed. They also defend their hives well against intruders.

I suppose there is no established rule as to the age queens continue to lay well. Very much depends on their having been in a nucleus or very

strong colony, and also whether they have passed good honey-seasons, obliging them to lay extensively. Revising the apiary during April and May, being an interval with very little honey-flow, I try to put away such queens as seem to go back or stand still in brood-rearing, as we want a good number for the thyme-blossom. I took away the old queens at some hives, but found more of them had either raised another one, killing the old queens at once, and in one case they kept both queens; but they have finally done away with the old one. A hive having 9 brood-frames and upward may be considered a good one with us. Less than 9 frames is a poor layer in a season when pollen is coming in plentifully, and stimulative food being given. But then, again, you can't tell exactly when the queen stops laying, as you may look in for three weeks or more, finding an increase of one or two brood-frames each time; all of a sudden they stand still. From 15 frames you are tempted to take away one or two, and find the next time only 11 or 12 frames. I never clip queens' wings, but I keep a record of them all, and find I am always, or nearly always, well informed, as the trace, even, of a superseded queen is easily known. Take all in all, I think the end of the second season is just the right time to raise new ones, the exception also being for longevity the third season. Some queens will never be superseded by the bees—they live and die together.

A friend of mine came around the other day, and I read to him "Dot Happy Bee-man." As we both talk German, we laughed till our "schtomacks went schplit."

Drones fly out and congregate on afternoons of warm days, as we frequently see. I have not yet observed whether they congregate at some particular point year after year, although I heard their loud roar one season, day after day, above the road I crossed to go to the apiary, but never could I distinguish them.

"All our eggs in one basket and too many irons in the fire," seems to be very general among bee-keepers; in fact, it seems as if most bee-keepers concluded, after a few years' trials, and hard trials too, that it is better to put "several irons in the fire." Being of the number, I must state, for the benefit of new comers into the bee-fraternity, they should not rashly do away with one business before having well grasped the other. When we began bee-keeping, all other occupations were discarded, to our great detriment. Slowly but surely they are taking their respective places again. What has been rejected is welcome again. Most bee-keepers live in the open country—at least they ought to for the greater benefit of their bees, and thus have an occasion to put up with live-stock, which comes in very handy at times; besides raising a few vegetables for the kitchen, this will help us a great deal to get along in a poor season. Since I find the question so largely discussed by many fellow-sufferers, I fully sympathize with them.

Our receptacles for holding extracted honey, come all the way from America to Palestine, and we find them a good deal cheaper than any thing that can be had here. I guess some of the readers of GLEANINGS will be astonished to hear it when I tell you that a thoroughly cleansed petroleum-can holds 50 to 55 lbs. of honey, and does the same service as new tins, and seldom have our customers had to complain about petroleum taste; this also was in former years. We take two petroleum-

cans and pack them into a petroleum-box, paying 5 or 6 cents each tin and box, soldering costing 7 cents each tin; nails and hoop-iron around the box, 3 to 4 cents, making a total cost of 36 cents for 100 to 110 lbs. of honey. If our California bee-friends could utilize the same, they could pack very nearly 3 lbs. of honey for a cent instead of one cent a pound, as mentioned on page 765, GLEANINGS, 1888. The tins are thoroughly cleansed by putting ashes and water, to stand a few hours, in the tins, and occasionally shaking them; after having rinsed them with fresh or warm water, a few drops of alcohol, lighted, finishes the whole. Can they not be had in their own country at the same rate, or cheaper, than some thousand miles away from their starting-place? PH. J. BALDENSPERGER.

Jaffa, Syria.

It is very interesting indeed for us to know that, away across the ocean, you have just about the same experience and difficulties we have to meet here. I am glad that you enjoyed friend Secor's poem. I felt a little anxious to know how it would strike our German readers. I hope that you and your friend both recovered after reading it. So you enjoy raising vegetables, as well as myself. You speak about the petroleum-cans of California. Why, my friend, the most common object to be found in any part of California is those empty petroleum-cans, and they have been for years utilized, or at least a great many of them, for honey-cans. Our carload of honey that came from California was put up in just that way. Even brand-new cans can be used now, at considerably less than a cent a pound per package. We now sell two of the cans, packed in a box, the whole arrangement brand-new, for only 65 cents, in 100 lots. Friend Woodberry, of Glendale, Cal., gets rid of the coal oil by simply making a hole in the corner, opposite the screw cap. After stacking them up in the dooryard for several weeks, the oil is entirely evaporated. There must, however, be two openings.

#### WHAT IS THE FINEST HONEY?

PRESIDENT MASON ANSWERS SOME HARD QUESTIONS.

**T**HESE questions have been handed me to answer in GLEANINGS. The first is, "Is clover honey superior to all other honeys? and if so, why? What makes it so?"

This question might be answered by the word *no*, and truthfully so by a great many lovers of honey; and then others would just as truthfully say *yes*. If a person's taste or preference is to constitute the basis for judging, we can have about as many negative and affirmative answers as there are kinds of honey. Some have so strong a preference for buckwheat honey that all other kinds are not worthy to be compared with it, and some parties in this region think nothing in the line of honey is as good as some kinds of honey-dew.

To be a first class judge of any thing requires a certain something that I don't know how to describe, and which but few seem to possess. An illustration has just come to my mind. I'm almost afraid to give it, for I may be wrong; but that isn't what I care so much about. Our sisterhood of bee-

keepers may take me in hand, and give me a good shaking-up, but I'll run the risk.

For several years I've had charge of what is known as the "exhibit of canned goods," at the Tri-State Fair at Toledo. It consists of canned fruits, preserves, pickles, etc., and it is quite an extensive display; and I have found it quite difficult to secure competent judges. It has been my experience, that, as a rule, it is somewhat difficult for ladies to agree as to which specimen is entitled to a first premium, and this is my reason: Each one will "positively declare" that the one that comes the nearest to her taste, or to what she has been accustomed to have, is the best, and does not take into account certain qualities that make it far superior to any other specimen.

Bee-keepers would scarcely be ready to admit that such as prefer buckwheat honey to all others, are good judges of honey, unless that preference is made subservient to *good judgment*.

In "Langstroth on the Honey-Bee," recently revised by the Dadants, it is said that "The whitest and best-flavored honey . . . is that gathered from white-clover blossoms," but no reason is given why it is best-flavored. I believe that white-clover honey is the best, not because it is the whitest or has a better flavor: for to me basswood (linden) honey is the best-flavored; and to others, raspberry, buckwheat, mangrove, orange, or some other honey is the best-flavored. I have had hundreds of pounds of basswood honey that was whiter than any white-clover honey I ever saw. There is something in the composition of clover honey that makes it more satisfying to the taste, that I can not describe, and is beyond the "ken" of science.

The second question is,

WHAT SHOULD GUIDE JUDGES IN JUDGING HONEY?

If judging honey at fairs is what is meant, it might be said that the premium-list should be the guide. For instance, the Buffalo International Fair premium-list says: "Display of comb honey, largest and most attractive," and the same in regard to extracted honey. In these, color and quality are not taken into account.

In the next premium list says, "Sample of comb honey." Here color and quality are the leading objects, and quantity and attractiveness are subordinate. Good judgment is quite a desirable commodity in judging honey.

The third question is,

IF JUDGING BY POINTS OF A MAXIMUM OF 20, HOW WOULD YOU ALLOT THE POINTS?

I don't think I would use a maximum of 20 points in judging honey. I should prefer not less than 30 or 40 points for extracted, and 100 for comb honey. For extracted honey, take into consideration the color and quality, the receptacle, and attractiveness of the display.

For comb honey, consider the size<sup>1</sup>, shape<sup>2</sup>, color, and cleanliness of the sections<sup>3</sup>; color of honey<sup>4</sup>; quality<sup>5</sup>; fullness of sections<sup>6</sup>; how filled at the edges<sup>7</sup>; evenness of comb<sup>8</sup>; empty cells<sup>9</sup>; general appearance<sup>10</sup>.

Judging by points takes more time, but will generally give better satisfaction than any other method, and can be applied to most things exhibited at fairs. The number of points can readily be arranged on any article by any person competent to act as judge.

A. B. MASON.

Auburndale, O., June 26, 1889.

Many thanks, friend M., for your valuable



hints. My opinion is, that people follow in certain ruts a good deal by the force of habit. It is so in selling honey. A certain style of package gets into the market, and people take a notion that they can not have it in any other shape; and sometimes it takes a good while to make a change. Basswood honey is certainly whiter than clover honey. I do not know that I ever heard anybody call clover honey handsomer, so far as looks are concerned, than basswood.

### SWARMING.

THE THEORY OF ITS CAUSE, AND HOW IT MAY BE PREVENTED.

**W**HAT causes the swarming spirit of a colony? is a question not fully answered as yet. I will hereby give my theory, and I think it is as new as it is correct.

We know, that, 21 days after the egg is laid by the queen, the young worker-bee will gnaw out of the cell. Two days later it commences to work, but inside of the hive only. About 16 days later she commences to gather pollen and honey. In summer time the worker bee will generally be dead 27 days after the first flight; so we see that the proportion of brood, house-bees, and field-bees, is 23 to 16 to 27, in the normal state of a colony. Of course, this is correct only if the queen has laid the same number of eggs daily for some time. In early spring, when breeding commences, no house-bees are in the hive, and the older bees have to do their work. The amount of brood is by and by increased, and the proportion of brood to house-bees gets gradually nearer to the normal condition. As soon as the queen has laid, for more than 23 days, as many eggs as she possibly can, we have the normal condition, and the colony is on its highest point of prosperity. The growing number of honey-gatherers has meantime filled the empty cells of the hive partially with honey, and consequently the number of eggs daily laid by the queen is by and by decreasing.

It makes no difference whether the greatest number of eggs laid by the queen is attributable to her fertility, or to the room in the hive devoted to breeding, or whether the number of eggs laid is, later on, decreasing from any other cause; we always have the fact that hereby a surplus of house-bees is in the hive at a certain time, because more young bees will come from the cells as the queen lays eggs. These young bees are desirous of feeding larvæ, but not all of them can possibly do so; and this condition of a colony starts the swarming impulse. The desire of young bees for more brood causes it. As much as possible, prepared food is given to the queen, and so she is induced to lay eggs in the started queen-cells, and a swarm is the consequence.

This theory explains every case of swarming coming to my notice, and the different ways by which swarming can be prevented to a certain degree. We know of

#### DIFFERENT WAYS TO PREVENT SWARMING.

1. If we remove some capped brood at the right time, and put empty combs, or, still better, foundation, into the brood-nest, we induce the queen to lay more eggs; consequently the house-bees have more work to do, and the surplus of house-bees dis-

appears. The next day fewer young bees will gnaw out of the cells, and the house-bees get less again, relatively to the brood. So this is a very good preventive of the swarming fever till the former condition of things reappears.

2. If we take some bees from a colony we get mostly house bees, because the field-bees go back to the colony. So this will prevent swarming for some days.

3. If we give to the house-bees more work to do, we can prevent swarming; so by cooling the inside of the hive. Then more bees are necessary to cluster on the brood, and swarming may be prevented for some time.

4. But the house-bees are the comb-builders too. If we give them occasion to build new combs near the brood-nest, swarming may be prevented in most cases, especially if the bees build combs for the purpose, that the queen may lay some eggs in them (Simmins method). These combs are clear profit to the bee-keeper. Why, I will show presently.

5. If we work our colony for extracted honey, and extract the honey from the combs in such a way that the queen always has plenty of empty cells, we shall have no surplus of house-bees, and swarming can be prevented. But we have to consider here, that a very strong colony needs relatively fewer brood-bees than a weaker one, so a strong colony may have a surplus of house-bees, if the proportion of brood to house bees is even not smaller than 23 to 16. So a very strong colony may swarm nevertheless, while a weaker one will not.

6. A moderate honey-flow which by and by crowds the brood, is just the thing to cause a surplus of house-bees, and so induces swarming. A very good honey-flow crowds, of course, the brood also; but the young bees will find plenty of work to do to prolong the cells, to cap the honey, and to evaporate the rapidly coming honey. Such a very good honey-flow gives plenty of work for young and old bees, and they pay very little attention to the brood.

I said that a surplus of house-bees will build combs at no cost to the bee-keeper. My theory is as follows: All the young bees feed themselves plentifully with pollen and honey, for the purpose of feeding the young larvæ. If a surplus of brood-bees is in the hive, some of them will not find larvæ to be fed; the larval food, or chyle, accumulates in the stomach, and will go through the stomach-wall into the blood. A surplus of blood is just the condition by which wax is secreted; consequently a surplus of house-bees causes wax secretion. If room and the necessary temperature are in the hive, new combs will be built; if the bees have no room for this purpose they build brace-combs, or thick wax lumps, on the top-bars of the frames, or they cap the honey twice as thick as usual. A newly hived swarm has no brood, consequently always a surplus of house-bees—at least the first eight days. In this time a swarm builds combs very rapidly, and at no cost to the bee-keeper, because this wax is secreted anyhow. We can observe this if we have a small swarm (especially an after-swarm) in a large hive, and the outside temperature is cool at night time, so that the cluster of the swarm is much contracted. We then find a great number of wax shreds on the bottom of the hive. This wax is secreted, but the bees can't use it, because the cluster is too small, and outside the temperature is too

low to form that wax into cells. If we give empty combs only to a swarm, this secreted wax is formed into brace-combs and wax lumps. The proportion of field-bees to the brood and house-bees is important too, and I hope to write about it in another article.

L. STACHELHAUSEN.

Selma, Texas.

Your suggestions are much in the line with those of our friend Hasty and Dr. C. C. Miller, although you have carried them a little further. I have often noticed the waste of wax by way of droppings on the bottom-board, brace-combs, and little lumps scattered about the combs where they were not needed, and extra cappings to the cells; sometimes extra thickness to the walls of the cells; and I have many times been impressed by the fact that these bees, were an opportunity given them, would build combs at no expense to the bee-keeper. It is along in this line of reasoning that friends Doolittle and Hutchinson conclude that bees will produce more honey, where they are obliged to build a certain amount of comb, than where the combs are furnished them. Other experiments, however (but they may be under different circumstances), indicate exactly to the contrary. See page 337.

### BILL-BEETLES.

#### THE OREGON BEE-KILLER.

I HAVE received from Mr. J. J. McGowan, Swan Quarter, several of these weevils. They were all packed in a strong wooden box, with cotton, and every one reached me in good order. The number and excellent condition delighted me. Mr. M. wishes me to discourse upon the natural history of these insects.

These are known in the South as bill-bugs; but bill-beetles would be a more correct term. They feed upon the corn, and often do great damage. They insert their beaks and often destroy the young plants. This is a species of *Sphenophorus*.

I send a drawing which shows its natural size, form and general appearance. As will be seen, these beetles have a proboscis, or snout, and so are weevils. A species of *sphenophorus* (*S. robustus*) is said to

destroy corn in South Carolina and Alabama. It is also stated that this weevil breeds in the corn. It is black, and a little larger than this one. The species sent by Mr. M. is six-tenths of an inch long, and of a rusty gray color. The entire back is punctured. I can hardly suggest a remedy for these pests, as I have never had opportunity to study them.

#### OREGON BEE-KILLER.

Mr. R. W. Keeney, Pilot Rock, Oregon, sends me an asilus fly which much resembles the Missouri bee-killer, except that it is only about two-thirds as large. Mr. K. says, "These flies destroy my bees. They can kill any thing that flies. He often launches on hoppers three times his own size, which he can easily bear away. He does not eat but sucks the blood from his victims. As soon as he has sucked one dry he drops it and is ready for another."

Mr. K. thinks this fly about half grown. This is a very common error. Insects, after they have

wings, do not grow. The growth takes place while yet larva. All bee-keepers know that bees do not grow after they are mature. Of course, a full bee is larger than an empty one. Female insects, like queen-bees, may enlarge a little when in the height of laying, and shrink a little as the ovaries rest from egg-production. I presume this asilus is a new species. If so I will name him *Asilus Oregonus*, or Oregon bee-killer, alias Oregon robber-fly. The fly is gray, and about one inch long. See my Manual on "Robber-flies." These flies were somewhat broken. I hope Mr. K. can send me more in good shape. A little cotton prevents breakage.

Agricultural College, Mich.

A. J. COOK.

### NOTES FROM THE KEYSTONE BEE-FARM.

#### NON-SWARMERS NOT NON-SWARMERS AT ALL.

WE have (I mean my wife and I) an Italian queen that I bought of Mr. Frank Boomhower two years ago, that had never swarmed. Our other queens have swarmed excessively. Last season I reared a fine lot of queens from her brood, and these also preserved the traits of their mother during the season. Thinking we had a big bonanza in the line of non-swarmers, we concluded to advertise through GLEANINGS, "Warranted non-swarming queens at regular prices," and I had actually written out what I thought was an attractive advertisement to forward for the June 1st issue, when our non-swarmers began to swarm, and now, June 17th, they have all swarmed. Even the original Boomhower queen has followed the example of her beautiful daughters. We have not tried to check swarming, because our strongest stocks are not storing any surplus, on account of the extremely wet and cold weather.

We have a Carniolan queen that I bought of Dr. Morrison last June. Sept. 1st she led out a large swarm. On the evening of the 8th, as I was making my usual round through the apiary I found, at the entrance of her old stand, seven young queens. They paid no attention to each other, but were determined to get back inside of the hive, which the workers would not allow, but would gently lead them out again. We had at that time a few queenless nuclei, where I ran the outcasts in, and five of them are to-day among our best laying queens.

From present indications we shall not secure any surplus until buckwheat and fall flowers, because the weather will not permit our bees to more than live and keep up brood-rearing from clover, and we are out of the range of basswood, which is four miles away. By way of experiment I think we will move a few colonies up to the basswood.

The *Ignotum* tomato seeds came all right, for which accept our thanks. We succeeded in getting 23 plants from the 25 seeds which the packet contained.

S. W. TAYLOR.

Harveyville, Luz. Co., Pa., June 17, 1889.

You have given us some very valuable facts. I have several times been told that certain colonies never swarmed. In fact, many have written that they had certain queens whose bees never sent out a swarm, and that young queens followed this peculiarity. I have invariably told such people to be slow in drawing conclusions; for my im-



A BILL-BEETLE.



pression was, that if a season should be just right for swarming, and the swarming mania should get into the apiary, very likely these non-swarmlers would get a going, and swarm for certain, when they once got at it. Your story verifies the above. You should still try this queen and her progeny; and even if you find they are *less* liable to swarm than your other stocks, you are making some progress.

### ALSIKE NOT A HYBRID.

SOME OF THE REASONS WHY IT IS MISTAKEN FOR A CROSS.

**I**N the issue of June 1st, Chas. L. Gough seems to have settled conclusively (to himself at least) that alsike is a cross between red and white clovers. I think it very unfortunate that that mistake was made by our botanists when they gave alsike its botanical name; and the sooner it is given another and less misleading one, the better. In your remarks to the article by friend Gough, you say: "If the seed you sowed contained no white clover at all, the phenomenon you mention is a mystery," etc.

To say, "There never had been a seed of white clover on the ground," as friend Gough puts it, is a pretty strong assertion; and if so, then the phenomenon would indeed be a mystery.

Last fall with us was quite wet, and this year white clover is very plentiful, especially where the ground was pastured closely. Alsike and red clovers do not stand pasturing like white clover. Clover seed will lie in the ground for many years; and when the conditions are favorable it will germinate. In the discussion of this subject some time ago, where friend C. F. Muth was interested (he having sold alsike clover seed, and the purchaser claimed that it came up red clover), I think the case would be of easy explanation if one knew the history of the ground for several years previously.

The hay I feed is mostly clover hay, and, of course, there is a large amount of seed in the manure. Some years ago I made a hot-bed, and the next year I used it as a cold-frame in raising radishes, etc., and the next year I threw the manure out, which was by this time thoroughly rotted, and the clover came up in it, to use a common expression, "as thick as hair on a dog's back."

Several years ago I broke up a hillside, sloping to the southeast (it being convenient to the house), and planted it in sugar corn, beans, tomatoes, etc.; the lower portion, which was more level, to potatoes. The next year I spread considerable manure from the horse-stable on it, and plowed it again, and plowed some ten or twelve furrows further up the hill. I planted it in peach-trees and in sugar corn, tomatoes, etc.; this year, also, the upper part, or sod, I planted in cucumbers. I cultivated as usual; and after my crop was "laid by" I sowed it in alsike clover (I had a little seed left from the spring, which I got from C. F. Muth). The next year I had mostly red clover; but above where I put the manure I had a beautiful patch of alsike, and below the manure it was mostly alsike.

Some three years ago I "stirred" with a double shovel some ground that had been in potatoes the previous year, harrowed nicely, and sowed in alsike and timothy. It was too late in the spring, and it turned very dry; and although there is oc-

asionally some alsike and hardly any timothy, I don't think the alsike and timothy turned to ragweed and briars, although I have plenty of them. I don't see any necessity of making a mistake in the seed of alsike, and white and red clovers, as they are so different in appearance.

A year ago this spring my brother sowed timothy and alsike on a field of wheat. On account of dry weather it presented a rather poor prospect when the wheat was cut; but the autumn rains helped the appearance, and now he has a fine field of alsike and timothy; and in places, where he hauled manure on the wheat ground, at a little distance it appears almost entirely red clover; but on examination there is alsike there also.

Georgetown, O., June 14, 1889.

S. C. GORDON.

The point you make in regard to the dissimilarity of the seed is a good one. Every bee-keeper should be so familiar with the looks of the seed of all the clovers that he will not make a complaint that he has been humbugged in buying the seed. If the seed does not look as you think it ought to, send it back instead of sowing it and then complaining of the seedsman.

### A NOTE OF WARNING.

A NEW BEE-DISEASE WHICH THREATENS TO ANNILATE WHOLE APIARIES IN CALIFORNIA.

**Y**OU will doubtless remember my letter of last winter, about the new bee-disease. If you are not too much pestered by ignoramuses, and entirely out of patience, I will try to show that my trouble was not due to a local cause, but was the forerunner of what threatens to seriously cripple the bee-keepers of the State. With the opening of spring I find my entire stock of 170 stands "gone where the woodbine twineth," and the monster making serious inroads among my co-laborers. From what little I am able to gather, I believe the same thing is at work in Inyo, Ventura, and San Bernardino Counties. Developments are a little different now, as to symptoms, from my previous description; viz., of mature bees, abdomen distended, and hard trembling; listlessness, death; brood baldheaded; many dead, two-thirds or fully developed sticking in the cell; queen a failure, and moth completes the work of destruction. So far as I am able to learn, there has not been over two per cent of natural swarming through apiaries in this county. We have arrived at the goal for which our eastern brethren sigh—non-swarmling; but like the man whose cow had learned to live without eating, death closes the scene.

I was sorry you apologized to Dr. Mason, for I saw by the twinkle of his eye, in his thought he said, "Now, I have got A. I., and I will just fix him this time, because I just know what I am talking about." That is the style of men that we want to keep talking just as long as they are in good humor; and the doctor has lots of that. Now, my purpose in writing to you is to hook on to the doctor or Prof. Cook, or some other good-natured scientist, who would take an interest in an investigation; also to stir some of the bee-men of this State, and sound the note of warning ere it is too late, if it is not already.

I should like to know what it would cost to make a microscopical examination and analysis of the

honey, etc. Although I am not a scientist, and have no facilities for fine work, yet I will venture an opinion that a fungus or animalcule resides in the honey, or about the hive. This State is overrun with minute pestiferous things, roaming about seeking whom it may devour, and it gets therein all cases. If I mistake not, this thing of which I write will, ere the new year, make a pretty clean sweep of the principal apiaries in this county. I am melting combs and clearing up, with a view to quit the business. Others concur with me in these views of the situation. W. A. WEBSTER.

Bakersfield, Kern Co., Cal.

It seems to me that you are taking a rather dismal view of the matter. I may be mistaken, but I can hardly think that this one you mention is any thing more than a temporary matter. We should be very glad to receive reports from your neighborhood in regard to it. There is one thing, however, that does disturb me somewhat. When I saw the ravages made by the parasite on the orange-tree, and realized how plentiful were house-flies even in January, it occurred to me more than once that in a climate without frost and snows, insect or fungus enemies can get a going; and who shall say where the end will be without any frost to cut it short, as it cuts short the yellow fever in Florida?

## BEE-KEEPING IN CUBA.

CONTINUED FROM LAST ISSUE.

IT will be seen that we have a steady flow of honey during the entire year; that there is at no time a complete dearth of honey, such as occurs in all of the States at times; that during at least eight or nine months of the year, the bees obtain more honey than they need for their own use; that the flow commences very slowly, gradually increasing for about four months, then as gradually decreasing for the same length of time.

Cuba is like all other countries in the fact that, while many different kinds of flowers yield honey, the surplus is obtained from two or three kinds only. At least three-fourths of our surplus comes from the bellflower, or *bejuco campanea*, or *bejuco aguinaldo*; a correct description of which, but not a correct engraving, will be found on page 767 of GLEANINGS for 1886. The habits of this flower are very peculiar, different from any other honey-yielding flora I know of, it being a daily and not a constant flowering plant. The flower opens out in the morning, continues in bloom the larger part of the day, then closes up, wilts, and finally drops off, having lasted one day only. The most peculiar thing about it is its great irregularity in amount of bloom from day to day. One day we may not be able to find a hundred blossoms in the course of an hour's search, while on the next the fields and hedges may be white with bloom; the next day, half as many; the next still less, and so on. The daily yield of honey fluctuates in almost exact proportion to the amount of bloom. A study of the table of daily yields during December and January, as given on page 540, may not only be interesting to those who are in the habit of keeping such records, but shows very accurately the amount of bloom each day.

The next in point of value to the *campanea* is the royal palm (and a royal tree it is too), which yields honey at all times of the year. I doubt whether we ever get much surplus from it, but its habit of yielding some honey steadily during the summer months, when few or no other flowers yield any thing, makes it of great value to the Cuban bee-keeper.

There is also a species of Spanish needle which commences to yield honey in September, and is still in bloom. A detailed description of the minor honey-plants here would not be valuable to your readers, as they are unlike any in the States.

Bell-flower honey is of excellent quality, in color about like basswood honey; body nearly or quite equal to white-clover honey, while in flavor it ranks next, in my judgment, to that honey. The flavor is more pronounced than is that of mangrove honey, but not as sharp or aromatic as either basswood or California honey. Honey from other sources is dark in color, of good body and fair flavor for dark honey.

Brood-rearing commences to increase about Christmas, increasing rapidly in amount until hives are full of brood and bees. All good colonies keep up brood-rearing during the entire summer and fall; but such colonies as do not gather their own supplies usually cease nearly all brood-rearing, except in lower stories, during the summer months, commencing again when the fall flow of honey sets in. The apiary was at its lowest ebb the first part of September, but from the 15th of that month until Nov. 1 it built up as rapidly as I ever saw bees build up anywhere at any time of year. About Nov. 1, queens generally commence to take their annual rest, but they do not entirely cease egg-laying at any time. We had to depend on the bees that were hatched out during October and November for our honey-gatherers during the main honey-flow. We have had so little natural swarming here that we know little about the time for that, except that the few swarms we have had, less than 20 in all, came out in February, March, April, May, October, and November. Probably having so many bees in one place is the reason why there has been so little swarming.

Some of the advantages here are the entire absence of swarming, and the small amount of brood in upper stories during the main extracting season. Nearly all can understand the value of these conditions. Queens are raised every month of the year; but it isn't best to raise any more than we can help during November and December.

Climatic conditions in Cuba make it necessary to work bees under sheds. Ours are covered with tiles; those at the Casanova apiary, with palm-leaves. The last are the best for all reasons, except danger from fires.

This last year has been the first one that any fully established apiary here in Cuba has been run for extracted honey alone. The Casanova apiary not having been, since it was built up, in charge of an experienced bee-keeper, and this one was run for increase the first two years. I have not only had to learn the peculiarities of a new climate and new location, entirely different from any thing I had previously known any thing about, but I couldn't follow closely in the footsteps of my predecessor, as he always worked for increase while in Cuba, and we cared only for honey this year. The work has been almost as fascinating as it was when first com-



mencing bee-keeping 20 years ago; but the result has been far from satisfactory or up to expectations, as can readily be seen by referring to back numbers of GLEANINGS, as follows: Page 744, 1883; page 593, 1884; pages 192 and 381, 1885; pages 621 and 767, 1886, and pages 506 and 611, 1887.

Now, what has caused this partial failure to secure a paying honey crop this year? On the correct solution of this question depends the future of bee-keeping in Cuba. Mr. Dussaq attributes the failure largely to the abnormal season, which has been as much so here in Cuba, as the past winter was with you in the States. While that unquestionably accounts for a part of it, I am inclined to think it is only a small part. There is no question whatever in my mind, but that we had fully twice as many bees here this year as were necessary to gather all the honey in our field. If Mr. Dussaq is correct in his opinion, this will not ordinarily be the case. I have watched the bees closely during the past year; have studied the history of the Casanova apiary for six honey seasons, and this one for three; and it is difficult to resist the conclusion that from 100 to 200 colonies of bees will store fully as much honey in one location here as will 500 or 600. There are probably locations in Cuba where this rule doesn't apply; but I am afraid that it does in this section of the island. Of course, a single season's experience doesn't positively prove this or any other opinion to be correct, and we are now working so as to have as many strong colonies as possible in our 500 hives at commencement of next honey harvest, and will give the matter a thorough test. I hope the result will show that I am wrong, as I shall be glad in this case at least, for the sake of those who have invested so much money in the business here, to part with some or all reputation I may have for possessing a clear candid judgment on bee-matters.

Notwithstanding the very medium results so far obtained, I find Cuba to be the most wonderful honey country I know any thing about, and have no doubt that bee-keeping can and will be made a decided success here, when undertaken under proper conditions and in a proper manner. All of my observations, as well as all evidence I can get from others, go to show conclusively, I think, that apiaries not too large for their location can be relied on to yield from 200 to 400 lbs. of honey per annum each colony, at a smaller relative expense than in the States. All ideas of immense apiaries in one location must be given up, and the same methods adopted as respects scattering bees as has worked so successfully with Messrs. Hetherington, Manum, France, and others, in our own country.

There are many things about our living here, about details of management, etc., which I could tell that would be of material value to any one intending to handle bees in Cuba, and would be interesting to many of your readers; but I hardly think it would be of enough value to most of your readers to pay for the space it would occupy in GLEANINGS. If you think differently, say so, and I will try to jot some of them down between this and the busy season next fall.

Havana, Cuba, June 1, 1889. O. O. POPPLETON.

After reading your first paper on bee-keeping in Cuba (see last issue, page 539), I at once dictated an answer; but Ernest, overhearing me, remarked that the article was to be concluded, so my answer was not

put in last month; but with this explanation I will give it now. Here it is:

Now, friend P., you have, by your above report, made me wonderfully inquisitive. What do you do with a crop of honey amounting to 50,000 pounds? What is the quality? Where do you sell it, and what do you get for it? In your table I have not noticed more than 7 pounds per colony in a single apiary. A. E. Manum, away up in Vermont, gets over 30 pounds from a single colony in a single day. Now, will he please tell us how many bees were kept in the same apiary, or in the same vicinity, when he got that enormous product? Can't you arrange by irrigation or something else, so as to have honey every month in the year? and, finally, is there a spot on the face of the earth where GLEANINGS goes, where bees make honey every month, winter and summer? By all means let us have the details of management.

#### FINISHING UP CELLS IN THE UPPER STORIES OF FULL COLONIES.

J. D. FOOSHE GIVES FURTHER PARTICULARS.

I RECEIVED GLEANINGS yesterday, and read carefully your comments on my article on queen-rearing. You express some doubt as to its working, except under the swarming fever.

I will say, that, when I first found it out, my bees had about passed the swarming fever. We had some beautiful weather here in April, but very few pretty warm days in May, consequently we had no swarming, or very little, in May. We had almost all we had in April; so when I first found it out there was no swarming; yet they worked out as fine cells as any natural-swarm cells I have ever seen. Any of mine will work out all I give them after the cells are started, and will work only those where the cells are started. I have not had a single one refuse to work them out. Where cells have been started I have had several built out since writing the article, and I must say that I have the utmost faith in the plan in any season of the year where the upper story has bees enough in it. I prefer placing a frame of brood of all stages in the upper story by the side of the frame of cells. They work only those cells out that are started, and no more. They never pretend to start another. Under the swarming impulse I don't know but that they might start more cells, but up to the present they have never done so. One main reason that I prefer to give the colony a frame of brood is, that we sometimes have sudden changes of weather; and you know where there is no brood in the upper story, bees are very apt to desert and go below if the weather is cool. With the frame of brood, the bees will remain above, or sufficient to care for cells and brood; and then, again, I think the frame of brood attracts more nurse bees, and perhaps the cells get better attention. It is a little strange to place a lot of empty cells in the upper story one morning, and go back the next morning to see what advance they have made on every cell, not leaving a single one untouched. So far as I can discover, they seem to start on them immediately. The cells that are started and transferred should be started on eggs that are just emerging into a

milky state, or will be hatching in five or six hours after giving to a colony to start them.

Coronaca, S. C., June 19, 1889. J. D. FOOSHE.

## HEADS OF GRAIN

FROM DIFFERENT FIELDS.

### PRODUCING SECTION HONEY ON BOX HIVES.

**M**R. ROOT:—I know it is a very busy time to stop to talk; but as you and most of the advanced bee-keepers have passed through what I am experiencing now, I thought a word of advice from you would be of great satisfaction. You may remember I told you that I was a rather small pioneer in the improved method of bee-keeping in this part of the country. I was made the object of many a smart joke on my crazy hobby; but my success in producing the nicest honey, and at the same time making some money, has turned the scale; there is quite an excitement springing up, and everybody appears to want to go into the bee-business. Men are coming from a range of several miles to get information and instructions how to proceed to get such honey, and as much of it, as I do, from a hive. I admit I feel ashamed that I know so little as a bee-keeper; but novices express themselves as being satisfied I know it all when they see my apiary with the beautiful white honey tiered up two or three crates high. Now, there is one thing I wish to consult you about, and it is a thing that has stirred everybody who has any kind of a gum, in these parts; that is, about using sections on common gum hives. I had a few such hives, and I made a crate to hold 18 one-pound sections, which are filled as nicely as on any hive, and the public have found it out, and many are coming to me for said crates, filled with sections to go on these gums, and they are running me out of supplies; hence the last orders. Now, is this a new thing, and am I responsible for breaking down the trade, by teaching everybody who has a gum, to produce section honey? S. DANIELS.

Pine Grove, O., June 22, 1889.

In our A B C book, at the close of the article on "Transferring," we gave a short plan by prying off the top of the old box hive and setting a Simplicity hive, filled with foundation, over it. It is true, there is nothing said about filling this Simplicity hive with sections, but the matter almost suggests itself, without being mentioned. In fact, it has been done a great many times, and the matter has been frequently mentioned in the journals.—Whenever any trade or occupation can be broken down by teaching short ways of accomplishing desirable results, by all means let it break. I think very likely that people who have bees in gums might do nicely in the way you suggest, and we thank you for calling our attention to it.

### MORE EXPERIENCE WITH BEE-STINGS AND RHEUMATISM.

At my table, when eating honey, without any other conversation leading to it, a German friend, with much animation, told the following: "After the Franco-Prussian war I suffered rheumatism (as the effects of my soldier life) for three years, never able to work, and seldom able to walk. One fine

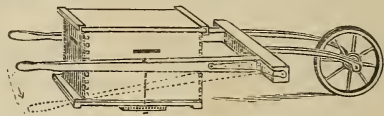
day in spring I coaxed them to carry me into the garden, and, sitting near the bees, I smelled honey and asked for bread and honey. The bees gathered around me, and, being left alone a short time, I tried to chase them off, and they stung me awful bad on the face and arms, fifteen or twenty stings before I got away. The swelling was terrible; but before it was gone I could walk; and when it was gone I was well, and never had rheumatism afterward, and immediately went to work." The name of this man is Henry Karstadt. I believe his statement. J. A. LOWE.

Hutchinson, Kan., June 28, 1889.

My friend, the above is very valuable; and from the numerous similar reports we have received, I am inclined to think that bee-stings are perhaps the best remedy for that fearfully stubborn disease, rheumatism, of anything that is known. May it not be that the hot sun and open air have also something to do with it? I can readily understand how our poor friend K. should get stung in the way he mentions. The bees got enough honey from his bread and butter to put them into the right mood for stinging fearfully, just about the time it was gone. As he was helpless, he probably got a good sound bee-sting treatment, especially for the first dose.

### ANOTHER HIVE-CART.

Seeing a cut in GLEANINGS of a wheelbarrow to lift and carry hives, I thought I would send you my arrangement. With it I can lift and carry the heaviest hives with ease. One handle is on a hinge, so it can be spread and closed up. The blocks and the handles go under the strips near the top of my hives.



WILSON'S HIVE-CART.

I think it could be fixed to go under the hives as well. The wheel is from a cultivator, and the springs from an old spring seat. A frame goes over the wheel to keep it from wabbling about, which it would do on the end of such a long spring. I have used this more or less for three years, and I think if it were perfected and made just right it would be quite handy. HENRY WILSON.

Clinton, Ill.

I will explain to our readers that our artist has not quite caught friend Wilson's idea. For Dovetailed hives, or hives whose bottoms may be fastened, instead of having a support under the bottom-board, a pair of blocks on the handles of the wheelbarrow fit into the hand-holes. With a movable-bottom hive, however, something must go under to keep the bottom in place, as shown in the cut. The frame mentioned, as attached to the springs to keep the wheel from wabbling, is omitted in the cut; and, in fact, friend Wilson has not made it plain just what this frame should be. A stout piece of flat iron, however, riveted to each one of the springs, and running over the wheel, with a sort of bow, would probably remedy the difficulty alluded to.



ARE THEY ONLY OLD WORN-OUT BEES, OR ARE THEY SOMETHING WORSE?

I mail you to-day some bees for microscopical examination, all dead in one hole, and alive in another. Our bees are dying by the thousands, and I have heard from 3 other bee-yards affected in the same way. It seems to affect the field bees most, judging from the fact of the wings of the dead and dying being ragged, and no dead bees are in the hives; drones are also suffering. The symptoms are a general languor, stupid dullness—in fact, they act drunk. When caught they seem to be unable to see, for they keep rubbing their eyes; and after a time, if the sun is shining, they will fly off. The honey-sac seems in all cases to be empty. They do not seem to die at once, but linger; and I am inclined to think in many cases they recover. They are scattered all over the yard among the grass, much the same as young bees after a swarm has issued. There is no tremble or shake to their actions, more than to chilled bees. All colonies seem to be affected. Clover is in bloom, and some sumac.

C. A. HATCH.

Ithaca, Wis., June 28, 1889.

Later.—Bees are not dying as much now as they were, with that peculiar trouble.

C. A. H.

Ithaca, Wis., July 4, 1889.

We are having a good deal the same state of affairs in our apiary just now; but I am inclined to think that it is nothing more than the fact that a large number of old bees have failed because their wings are worn out at about the same time. Another thing, I am pretty certain that the unusual amount of wet weather we have had for two months past has been unusually severe on the wings of our little friends. They came so near starving in June that they often ventured out between showers so much as to get their gauzy wings repeatedly saturated with rain. This would be quite apt to render the wings less durable.

#### IS IT TRUE?

While lying in the hospital here, I came across an item in the *St. Louis Republic*, of June 8, which I thought would interest you. I have clipped it out, and inclose it in this letter for you. I know nothing about the truth of the item.

E. HOSTETLER.

St. Louis, Mo., June 10, 1889.

The item referred to is as follows:

#### STUNG TO DEATH BY BEES.

Henry Wright, a farmer, living near Maud, in this county, was stung to death by bees at his home to-day. He had just started to this city, and was coming over a stile when the bees attacked him with the above result.

Shelbina, Mo., June 7.

Can not some one among our subscribers in the vicinity of Shelbina tell us whether the clipping is true?

#### A HORSE STUNG TO DEATH.

One of our subscribers from Australia, J. F. Johnson, Kyneton, Victoria, sends us the following clipping, taken from the *Melbourne Argus*:

#### EXTRAORDINARY ACCIDENT NEAR BRISBANE; A HORSE STUNG TO DEATH BY BEES.

An extraordinary accident occurred yesterday afternoon. A man was driving along the Bayswater-road, in the suburbs of Brisbane, in a spring-cart, with a number of hives of bees, when by some means he upset one of the hives. The bees attack-

ed the horse, causing it to bolt. After galloping for some distance the horse fell, and fractured its foreleg. The bees swarmed upon it, and soon stung it to death. So dense and vicious was the swarm of bees that the traffic on the road was suspended for a considerable time.

The facts may be exaggerated, but it will serve as a warning.

#### OWED TO P. BENSON.

I hav jist writ the followin' owed to P. Benson, wich I sen' tur publerkashun; to wit, viz:

When ere I tuk my GLEANINGS down

And got the "small fry" huddled round

Ter listen while I red,

The fust peace that must greetee hour eye—

Thur picturs, splained to each one bye,

Was what P. Benson sed.

P. has writ you menny er line,

An off his 'umor, we opine,

Has hit our funny box;

And that his poem on ther fly

Jist tickled till we'd almost cry,

You may jist bet yer socks.

And P.'s a genus, that he is;

An' when you git er rhyme of his.

Jist send the lines to me.

Of all the orthors that I mete,

None else has got the same concete

That 'umors with a bee.

An' doubtless P. spins from afar

His tails of myrth, with naught ter mar

His pleasant fancies fly;

And if ermongst the bees he thridd,

And they shud chide, you well mite bid

P. Benson a good-by.



#### THE HOME RUN.

For doubtless then tru 'umor'st find

Its instant vent not thro ther mind,

Nor by ther pens parade.

But P. would personate the fun,

And surely make a good home run

Without a poet's ade.

CHARLIE RYAN, *The Orange Poet*.

#### BEES AND FRUIT; A FRUIT-GROWER MAKES CHARGES AGAINST THE BEE.

There seems to be quite a prejudice in these parts against the honey-bees. See article published in the *Farm and Home*, of Springfield, Mass., June 15, which I inclose.

O. F. ANGELL.

The Dalles, Ore., June 24, 1889.

#### BEES SOMETIMES INJURE FRUIT.

I see that the statement of the experiments of N. W. McLain, of Aurora, Ill., with honey-bees, is going the rounds of the papers as conclusive evidence that bees do not puncture grapes. As an ob-

server of the facts in the case, and a practical fruit-grower for the last 35 years, and with several colonies of bees quite a portion of the time, I am prepared to say that those experiments are not conclusive. Bees have striking peculiarities, and in none are they more peculiar than in their tastes. They attack certain varieties of peaches with great avidity, working through the skin and eating into the flesh even before the fruit is thoroughly ripe, while other varieties, to our taste sweeter and riper, are left untouched. Hale's Early is always a favorite with them, without reference to the supply of other food. Grapes they do not attack, except under certain conditions. These conditions apparently are that the fruit must be very ripe, the weather dry and warm, and other food scarce. They have sometimes destroyed, or rendered unfit for market, tons of grapes in our vineyards in a single day, puncturing the skin so that juice would ooze from several grapes in almost every cluster.

Lake County, Ohio. H. G. TRYON.

Friend A., I am glad you have called our attention to this matter. Mr. Tryon is not only one of the foremost horticulturists in the State of Ohio, but he is most excellent authority on any such subject. Perhaps after he reads over what I said some years ago about bees working on the peaches he may change his views a little. I quite agree with him in saying that Prof. McLain's experiments, to see if bees would eat fruit, amount to just nothing at all, and I was well aware of it at the time. Bees will not exercise their powers of pulling things to pieces when shut up in a wire-cloth house; and they may not exercise these powers, either, in the open air. If the experiment were made with all possible care, perhaps it would fail a hundred times; but for all that, I am satisfied there are times when bees destroy enough grapes to be quite a nuisance in a vineyard. I am aware, however, that they are blamed hundreds of times for what they never did at all. Perhaps friend Tryon is not aware that the bee-keepers and horticulturists of Michigan met in a joint convention some years ago, to talk over this matter. A great many grape-growers are bee-keepers also. Quite a number of them were present at this convention; but not one of them that I know of ever discarded bees because the bees troubled his grapes. Where both the grapes and the bees were his own property, he managed with very little difficulty so as to have no interference to amount to any thing.

#### MINERAL WAX; WILL IT COMPETE WITH THE ARTICLE FROM THE HIVE?

I inclose a newspaper clipping, cut from the *Southern Mercury*, published at Dallas, Texas, concerning a mineral wax. Can you tell us something about it?

W. A. CARTMELL.

Crowley, Texas, June 24, 1889.

A curious illustration of the treasures of the soil, often overlooked for a long time, is the discovery of mineral wax in Utah. It was discovered three years ago on the line of the Denver & Rio Grande Railroad, covering an area of 150 acres. Over 1000 tons a year are secured. It looks like the wax that is made by bees, and can be used for the same purposes. It is mixed with paraffine in making candles, and is used in the insulation of electric wires. It needs no refining for ordinary uses. The discovery is a hint to our land owners, that their farms often contain riches that are overlooked. The Pennsylvania farmers worked the oil-fields for generations without a dream of the wealth under foot.

I heard about the mineral wax when I was in California, and I believe that some samples were shown me; but I can not now

tell just where or under what circumstances. I think, however, some of the bee-men assured me that it would not answer for foundation. Will some of our friends in Texas, California, or Utah, give us more light on the subject?

#### CANNING CORN.

Some time since, I noticed a short article on canning corn. It said it is almost impossible to keep it from spoiling, and also expensive—too expensive for common practice. I will take the liberty of sending you a recipe for canning corn, that I have used with perfect success for five years, canning from 10 to 40 qts. each year.

Take the corn when it contains the most milk; cut carefully, so as not to get any of the cob, and can as soon after pulling as possible. To every 6 qts. of cut corn take one ounce of tartaric acid; do not can more than two quarts at a time, using acid in proportion. Your success is sure if you boil but 2 qts. or 3 pts. or 1 qt. in a vessel at a time. Have your right proportion of acid dissolved, and add it to the corn when the corn begins to boil. Boil the corn till done, using just water enough to cook the corn; do not have any juice left over when you put it in your can; close quickly. I cover the can with a little patch of muslin before placing on the cover. I prefer tin cans, and I do not have the sealingwax too brittle.

#### HOW TO PREPARE CANNED CORN FOR THE TABLE.

Remove the cover, drain off what little juice there may be, into a teacup, and save; pour the corn into a vessel; add sugar, salt, butter, pepper, and reserve the cream till you lift it for the table. Have dissolved in a cup a teaspoonful of soda. Add some of it, and let the corn cook slowly. Taste a kernel occasionally; as long as it is sour, add more of the soda water; boil the corn a good while. In case you should get too much soda into the corn, add some of the water you had poured off at first and saved; that is all the reserved juice is good for.

MRS. J. A. LOWE.

Hutchinson, Kan., June 28, 1889.

Very likely your plan will work, my friend; but is there not a good deal of fuss and bother about it, especially if one wanted to put up considerable? Our corn and tomatoes canned together, as described a year ago, have kept perfectly. The only difficulty we meet is, that the tomatoes are cooked fit for the table a good deal before the corn; therefore the corn must be separated from the tomatoes and cooked by itself, to have it real nice.

#### THE GOLDEN BEE-HIVE, AND BY WHOM PATENTED.

I see in GLEANINGS you are getting after the Golden bee-hive men. They threatened to prosecute me last season for infringements on the Golden hive, but I told the persons who told me, I had books to show the model of my hive. Mr. Henry Weeks, Dover, Tenn., has the county right for this county, and Mr. John Parker, same address, sells them for him. They sold to several neighboring bee-keepers. I have made some of the Golden hives, and have transferred and divided some for my bee-keeping neighbors. They furnished one of A. I. Root's cold-blast smokers and a little pamphlet with the hive. The book doesn't say any thing about the Golden hive, I think, but it is a treatise on bees. I have never read the book. The patent



was issued to D. Thompson, Nashville, Tenn., July 3, 1877, for a term of seventeen years. Your article on "Debt and Credit" I call excellent, for it seems to hit the nail square, and drives it up. I follow the mechanical trade of iron and wood worker, and I find persons, it seems to me, who could do better than they do.

S. L. MEDLIN.

Moltke, Tenn., June 11, 1889.

#### BLUE-JAYS BEE-EATERS, CAUGHT IN THE ACT.

Did you ever hear of blue-jays eating bees? I have killed three this spring, and found their crops full of bees. Now, don't say that they had picked up dead bees, for I saw one go from hive to hive and catch them as they were coming in. The other two were in an apple-tree which was very full of bloom, and on which the bees were working very strong. The jays were picking them from the bloom. My wife and I stood and watched them for some time until we were quite sure that they were catching bees, and then I shot one. The other was so intent on getting his dinner that it did not fly. I then shot it, and on examination found them both loaded with bees.

J. CONGER.

Wyoming, Ill., June 24, 1889.

I believe we have had similar reports in regard to blue-jays before; but they are, perhaps, not as much addicted to eating well-filled honey-bees as are the king-birds. See description of the matter in the A B C.

#### PROSPECTS IN ARIZONA.

Times here are dull. Honey sells at 5 cts., and wild bees are filling the cavities among rocks, in the giant cacti, or even hanging a cone in thick brush. The harvest is nearly past. Early peaches, with apricot and first fig crop are about gone. Grapes will soon be ripe, of such quantity and quality as have no rival. This is a beautiful "sun-kissed" clime, with sometimes a little too much of the "kiss." Oh, yes! I have a brother of yours for near neighbor. I am wondering if I should like you as well.

B. F. JOHNSON, SR.

Tempe, A. T., June 15, 1889.

Just as soon as my eye caught your letter from Arizona, I began wondering if you were anywhere in the vicinity of my brother. I know what a large area Arizona has, and our readers remember, doubtless, my description of its weird wildness. If that brother will stick to one spot long enough, I should like very much to make you all a visit soon. Do you mean to say that real nice honey sells as low as five cents?

#### FRADENBURG IN MONTANA, AND WHAT HE THINKS OF THE LOCALITY AS A BEE-COUNTRY.

Perhaps many of the readers of GLEANINGS would like to know if I meant what I said last spring when I said that I was going to Montana. Well, here I am in this far-off land. I came here about the middle of May, and about the first person I met here was friend Bingham, the smoker man, from Michigan. Although we had never had a personal acquaintance before, we became friends at once. This is no place for bees. I have seen but one stock since I have been in this State, and it was one a friend brought to Box Elder, a station 50 miles east of here, from Port Washington last March, and they looked badly demoralized, being nearly starved, and dwindled to a mere handful. I presume they have all died ere this. This town has

been settled for 20 years or more, but I can't learn that there has ever been a bee brought here. There are no trees that would produce either pollen or honey of any account. There are some spots of wild weeds and flowers, but they don't look to me to have life and vitality enough to secrete much honey, even if there were bees to call for it; yet I may be somewhat deceived, as this is an exceptionally dry year for this dry country. Their usual rainy season is now nearly passed, and scarcely a drop of rain has fallen. I expect to remain here a week or two longer, and then return to my home in Port Washington, Ohio.

A. A. FRADENBURG.

Fort Benton, Montana, June 18, 1886.

#### WIDE FRAMES AND HONEY-BOARDS

For some years I have used wide frames for section honey, without honey-boards, and I have been annoyed on account of the bees fastening the bottom of the wide frames to the brood-combs. Often, in pulling the wide frames to get them loosened from the brood-combs, the latter would fall with a tremendous jar, thus greatly disturbing the bees, and often irritating them. I have often wondered how this could be avoided while using wide frames. If a honey-board is used, the tops of the frames are raised too high to let a flat cover go on the hive. I have thought that a honey-board could be used, and cleats tacked on the projections of the wide frames, to raise them a bee-space from the honey-board, thus obviating the crushing of bees while handling the frames; but in this case a half-story cover must be used. Do you know any better way to overcome the difficulty?

T. E. HANBURY.

Atlanta, Ga., July 1, 1889.

If you will turn to page 24 of our price list, you will see illustrated a honey-board, and alongside of it a rim. The purpose of the latter is to raise the upper story of the Simplicity hive up so as to leave a bee-space under wide frames, or frames for the extractor. The honey-board will obviate all the troubles of brace-comb attachments between the brood-frames and the wide frames.

#### A RATTLESNAKE AMONG THE COMBS OF A BEE-TREE, DEAD, AND HIS MOUTH WIDE OPEN AND FILLED WITH HONEY.

Seeing in GLEANINGS that bees do not like snakes, I will tell an incident that occurred within half a mile of here. Last Saturday two colored men cut a bee-tree; and in taking out the combs of honey they found a large rattlesnake, which had crawled in the tree at the ground, and up the hollow to the combs. Being about 20 feet from the ground, the combs were built around him and even attached to his body for about 2 feet. He died with his mouth open, and the bees made combs in his mouth, and filled it with honey. I did not see this, but I saw the man who took the honey out, and he told me the story. Now, what did that snake go up there for? Did the bees kill him?

Our bees have done very well this spring; very little increase.

D. D. SLATER.

Blackville, S. C., June 6, 1889.

I think the snake had learned to eat heavily laden bees, and possibly to eat the honey out of the combs; and I presume likely the bees stung it to death. If anybody else can explain the matter any better, we should be glad to have him do so.

## REPORTS ENCOURAGING.

### BOOMING.

**O**UR bees are just booming. We are extracting right along, and that is very uncommon for this time of year here; but the white clover has yielded us lots of honey, and the linn will soon be on hand. That will give us another week's flow that will give us barrels of honey. As a general thing we get our honey in August and September; and if that keeps up in proportion I don't like to try to guess how much honey we can get.

J. PARSHALL.

Skidmore, Mo., June 21, 1889.

Clover is in full bloom, and honey is coming in fast, with prospects of a good yield.

Nashua, Ia., June 19, 1889.

G. W. STOCKS.

### THE GREATEST HONEY-FLOW FOR YEARS.

We are having the greatest flow of clover honey that I have known in 15 years.

Centerville, Ia., June 24, 1889.

G. B. REPOGLE.

### ITALIANS AHEAD OF BLACKS FOR HONEY.

We have succeeded in preventing swarms, and secured an average of 28 lbs. from blacks, and 38 lbs. from Italians, of nice section honey, and have two supers on each hive, with 56 sections, from a good start of comb, all the stages to nearly sealed, and we hope to get an average of 75 lbs. or more of white clover honey, then we expect a good flow from Spanish needle next fall.

W. W. ADDISON.

Bumpus, Ill., June 29, 1889.

### ANOTHER HONEY-QUEEN.

White clover is abundant. Basswood opened yesterday. I pass two trees four times a day; new honey has been in the market 3 weeks. I have taken 48 lbs. from one colony, more beautiful and delicious than I can describe. No other colony in the same yard approaches this one; only a part of the others are at work in the sections. Our boss honey-gatherer is a match for your "honey queen."

Madison, Ind., June 18, 1889.

J. CADWALLADER.

### BEEES DOING FINELY.

Bees are doing finely on clover. Basswood will commence to bloom in three or four days. We expect to extract on the 17th. Owing to many rainy days and very cool nights for some time past, the bees have not stored as much honey as we think they would have done, had the weather been more favorable; yet they have done well, and perhaps the abundance of rain may improve the future crop.

MILLER BROS.

Bluffton, Mo., June 13, 1889.

### THE SEASON IN CALIFORNIA NOT A FAILURE, ETC.

I see reports from various sources, that the honey-crop of California is a failure for this year. Now, such statements are very misleading. The season is only half over, and the yield in some localities in Southern California is quite up to average years, and the quality of the honey is superior to most years, both as to flavor, body, and color. In former years I have extracted honey as late as October 17, and then have the bees fill the upper hive with fair honey for their own use. The abundant rains of this year almost insure a yield of honey late in the season. I have about two tons of nice sage honey now on hand.

C. A. WILSON.

Los Angeles, Cal., June 25, 1889.

### IN THE BASSWOOD BELT; PROSPECTS FAVORABLE.

I wintered 80 swarms in my cellar last winter, and lost two. I lost some this spring, and sold a few, so I have 66 left in my two yards. Last year, from 32 swarms I made one ton of honey in basswood bloom. This season, white clover is looking well and our bees are doing well. The basswood is very full of buds, and will be in bloom about the 10th of July. That will be our main crop. We should like to have you come out here during basswood bloom. If we have the right kind of weather you will see some good work done in the bee-yards.

Viola, Wis., June 24, 1889.

B. W. LAWTON.

## REPORTS DISCOURAGING.

### LONG FACES.

Bee business is dull, discouraging, which accounts for being slow in renewing. For three weeks bees have been sitting on the portico of the hives, watching the rain with long faces.

Lyons, Ind., June 12, 1889.

J. SCHOLL.

### CALIFORNIA A LITTLE MORE HOPEFUL.

Since I wrote you last, we are having a little more honey; but the crop is, or will be small. Unfavorable weather is the cause. A number will not make expense of running.

M. H. MENDLESON.

Ventura, Cal., June 11, 1889.

## NOTES AND QUERIES.

We solicit for this department short items and questions of a practical nature; but all QUESTIONS, if accompanied by other matter, must be put upon a SEPARATE slip of paper with name and address.

### CHAPMAN HONEY-PLANT.

The Chapman honey-plant began to bloom June 19. I have just measured some of the plants. The largest measures just 7 ft. 2 in. in height; average, about 4 ft.; heads on the largest plants, from 30 to 40.

M. S. PERCIVAL.

Rugby, Tenn., June 25, 1889.

### BEE-STINGS A POSITIVE CURE FOR RHEUMATISM.

I have been troubled for years with rheumatism; and when punctured a few times by the bees I found I was entirely cured. The fluid extract of bee-sting is an old eclectic cure for rheumatism.

Kirkwood, O., June 24, 1889.

M. N. MCNEIL.

### WHITEWASH INSTEAD OF PAINT, FOR HIVES.

I have been using common whitewash on my hives for three seasons. I have had from 40 to 75 colonies. I find it cheap, and it gives the hives a neat clean look. I think it is cooler than paint, and at the same time it helps to preserve the wood. I should like to know if any one else has tried it. It takes only a few minutes to apply it. I can always have my hives looking *fresh and white*.

Musson, La., June 21, 1889.

DR. A. W. TUFTS.

### DOOLITTLE'S NEW BOOK.

Doolittle's new book is very interesting; but I know by experience that his new plan of raising queens in full colonies over a queen-excluding honey-board does not work every time. In this locality, during the horsemint flow every queen-cell will be destroyed. May be it would work with the cell-



protector. I have not tried it as yet; but I believe the plan will always work in spring, and as long as the colony is inclined to swarm.

Selma, Texas, June 7, 1889. L. STACHELHAUSEN.

#### VERITABLE ROBBER-BEES.

Mr. A. C. Waldron sends some small shining hairless bees that are robbing his bees. He says they attack only one colony, and are very numerous. These are common honey-bees, hybrids (Italians and blacks). They are small, shining, and black, as they have had nearly all the hair pulled out. They are veritable robbers.

A. J. COOK.

Agricultural College, Mich.

#### GALLBERRY HONEY.

I this day send you a sample of extracted gallberry honey. This is the first honey for market; and the six years I have been here it has never failed to give a good crop. Please give your opinion of the same. I think it quite nice, and should not be classed as Southern honey.

S. C. CORWIN.

Sara Sota, Fla., June 16, 1889.

[The sample came duly to hand. The color and body of the honey are good. While we do not think that the flavor is quite equal to that of white clover, yet it ought not to be classed with the ordinary Southern honey, so called.]

#### IS HONEY FROM CATNIP BITTER?

I had a large quantity of catnip in my yard. I was talking with a friend a few days ago, and he said that catnip would produce honey that was bitter. I should like to have your views on it. If I thought it would be an injury to the honey, I would cut it all down.

THOS. PHILLIP.

Holland Store, June 7, 1889.

[You are certainly in error in thinking that the honey from catnip was bitter, or even poor. Some years ago one of our bee-friends planted catnip largely for honey alone, and he found the quality was very fine. It has a somewhat aromatic flavor, like that from the mints and basswood; but this flavor is not bitter, and in no way objectionable.]

## OUR QUESTION-BOX,

With Replies from our best Authorities on Bees.

All queries sent in for this department should be briefly stated, and free from any possible ambiguity. The question or questions should be written upon a separate slip of paper, and marked, "For Our Question-Box."

QUESTION 135.—*a. When, in your locality, does white clover first begin to yield nectar? b. How long does it usually last? c. What other sources have you for white honey?*

a. May 25 to June 10; b. 4 weeks; c. None.

DADANT & SON.

a. About June 10; b. It lasts till about July 10; c. Basswood.

GEO. GRIMM.

a. About June 10; b. Lasts from two to four weeks; c. Linden.

A. J. COOK.

a. As a rule, with the beginning of June; b. As a rule, to the beginning of July. c. None.

C. F. MUTH.

a. Usually about June 15; b. From two to three weeks; c. Raspberries, sumac, and basswood.

A. E. MANUM.

a. About June 10. b. Until July, or until basswood gives nectar. c. Raspberry, willow, sumac, linden.

RAMBLER.

a. About June first; b. From two to three weeks; c. Basswood and sweet clover.

A. B. MASON.

a. Generally from June 1 to 6; b. From two to four weeks; c. Basswood, red-root, and sometimes mint.

S. I. FREEBORN.

It used to begin about June 6; but for several years past the yield of honey from that source has been so light that it has been a little difficult to tell just when it began and when it left off. c. Basswood.

H. R. BOARDMAN.

Usually bees commence on white clover from June 1 to 10. There is some clover in blossom here now May 28. But the bees are not making a living. Weather is too wet and cold. For white honey in this locality we have white clover and basswood.

E. FRANCE.

a. Usually not far from June 20. b. From two to three weeks. c. Basswood. White clover is not usually a heavy yielder with us, bees working on a variety of flowers. The common daisy often furnishes honey enough for brood-rearing, for a short time.

P. H. ELWOOD.

a. I have seen white clover in bloom in January, but never had any yield from it before March. b. About July 1. Some favorable seasons it will last till August. c. In the fall we have the smartweed and eupatorium, which yield lighter honey than white clover.

PAUL L. VIALON.

a. It varies at different seasons, all the way from the first to the last of June. b. The heavy flow from white clover usually lasts from 10 to 20 days; but a very moderate flow will sometimes last six weeks. c. A very small amount of basswood. This refers to my Iowa location, as my answers all do, when different locations would make a difference in the reply.

O. O. POPPLETON.

a. From the last of May to June 10. The bees don't seem to accomplish any thing on it until about ten days after the first blossoms are seen. This year was exceptional. The first blossom was seen May 15, and three days later I saw a bee on a clover-blossom. b. Three to six weeks. c. Practically none, although cucumbers help some for winter stores.

C. C. MILLER.

a. Usually from May 25 to June 1. In a wet season, somewhat later. b. The first crop of white clover, ordinarily about a month; if the rainfall is plentiful, younger plants come forward and even new ones from the seed, so that the flow is extended almost through the entire season, although the yield may not be large; c. Apple-blossoms, raspberry, polygonum, blackheart. Apple-bloom is not very white. Linden in some seasons yields well; in others, not at all.

MRS. L. HARRISON.

a. We have no white clover at all, except with blue grass, in front dooryards. b, c. Wild alfalfa, white, purple, and black sages; black sage abounding in only a few localities, commences yielding, I will say, in the last half of April. Purple sage, perhaps the most abundant of any, especially near the coast, comes in the fore part of May; and white sage abounds in the more elevated districts away from the coast, in the last half of May. Wild alfalfa comes about the same time, or a little earlier, than white sage, and is about as good for honey. The time of bloom varies from one to six weeks. Each variety yields honey from four to six weeks.

R. WILKIN.

a. From June 10 to 20; b. About one month; c. Willow, apple, and teasel; but basswood gives far more honey than all the rest combined. Some years a little alsike clover is sown, which yields far more honey than the white, with us; but the honey is of so dark or reddish a color that I do not like it, on account of its being sure to spoil the looks of the first sections off in the basswood yield.

G. M. DOOLITTLE.

a. About June 1, varying about ten days one way or the other, according to the season. b. It always lasts clear into the basswood, which begins blooming July 1, as a rule, and many times I have known the bees to gather considerable white-clover honey after the basswood was over, after July 20. c. The basswood is our only other source after white clover, to any considerable extent. The pleurisy-root yields white honey and is a profuse yielder too; but as yet there are not enough of the plants in my locality for my large apiary to make much surplus from; however, it has been rapidly increasing for several years past.

JAMES HEDDON.

a. It comes into bloom about May 20, and begins to yield honey about twenty days afterward. I have kept close watch of this for several years, and here is the record—that for 1886 being lost.

	1884.	1885.	1887.	1888.	1889.
First bloom -	5-23	5-20	5-20	5-23	5-12
Began to yield honey	6-14	5-28	6-4	6-6	6-11

As will be seen, this year it bloomed earlier and began to yield honey later than usual. b. The yield runs into that from basswood, which begins about July 1, and does not amount to very much after that closes, about ten days later. c. Besides basswood, the crop from which grows less and less each year as the trees are cut down, we frequently get considerable honey from sweet clover, for which there is an excellent prospect this year.

J. A. GREEN.

White clover seldom yields much surplus before June 10 in this locality, although it blooms much earlier; and at the close it tapers off and mingles with other things in such a way that it is hardly possible to state its duration. Some years it seems to yield scarcely at all; but the fact that I do not see bees working on it is not full proof that they are not doing so on some other portion of their range. In regard to its blooming, I find the following on my records:

Year.	Began.	Closed.	Days.
1880	May 20	Aug. 15	88
1881	" 22	Sept. 11	113
1882	" 27	Sept. 13	118
1883	" 29	Oct. 7	125
1884	" 19	Sept. 6	110

As to other sources of white honey, I have some basswood. I used to credit wild basil and white cornel with furnishing considerable white honey; but with the lapse of time I have come to doubt it.

E. E. HASTY.

The above question was intended to indicate to some extent whether it is practicable to move bees from north to south, so as to keep in the clover bloom. Friend Manum, I believe, is the furthest north of any of our reporters, and he gives the date as June 15; while Freeborn, of Wisconsin, might be nearly as far north, he gives his report as from the 1st to the 6th. Friend Elwood, in York State, puts it not far from June 20. Friend Wilkin, of California, says they don't have any clover, which I was

well aware of. Friend Viallon says they seldom get any yield of honey from clover before March. Sometimes it lasts till August. My impression is, that we are indebted to white clover more or less in all our localities, say up to August or even later. Even here in Ohio I have seen quite a yield of what I pronounced white-clover honey, during August and September; and as the bees were working on white clover almost as much as on the red, it is difficult to decide, if, in fact, we can decide at all, which kind of clover gives the more. The above answers also indicate that basswood is not, as a general thing, as widely distributed as white clover.

QUESTION 136.—a. Do you ever get enough honey from red clover to secure a surplus to any extent? b. What is the most you ever secured from this source?

No.

DADANT & SON.

No.

H. R. BOARDMAN.

a. No.

A. B. MASON.

a. No. b. (?)

A. J. COOK.

a. No. b. None.

E. FRANCE.

a. No. b. Winter stores.

GEO. GRIMM.

a. No. b. I am not able to tell.

P. H. ELWOOD.

No; but little red clover is raised near me.

O. O. POPPLETON.

a. No; b. It has been so mixed up with honey from other sources that it is impossible to tell.

MRS. L. HARRISON.

Several times red clover has been planted here; but I never had the bees gather any nectar from it.

P. L. VIALLO.

a. Only once in a great while we secure more honey from red than from white clover. b. I don't know.

C. F. MUTH.

a. I once credited red clover with a few barrels of honey, but afterward thought that the blue vervain should have had the credit.

S. I. FREEBORN.

a. No red clover here. I never got any that I knew of when I lived in the East, and even had my doubts of any one else getting any worth counting.

R. WILKIN.

a. No. b. I never learned. The yields reported from red clover, I think, are in localities where a second crop is raised for seed; the blossoms are smaller.

RAMBLER.

a. No. b. I don't know that I ever got any; but one year, during a yield of buckwheat, two colonies gathered light honey that may have been red clover.

C. C. MILLER.

Though I have known my bees to work on red clover, I never knew them to make much surplus from it, and I leave it altogether out of my calculation in estimating the honey-crop.

J. A. GREEN.

a. Only one year did I ever get any considerable quantity of red-clover surplus honey. I think nearly two thousand pounds of extracted honey was the amount that year. b. Answered above.

JAMES HEDDON.

Not of late years, as there is a little worm which works on it and this prevents its blossoming at all. In 1872 I obtained about 30 pounds of honey from this source from some of my best colonies, and did



nearly as well one or two other years prior to 1880. This was all gathered by Italian bees, while at the same time the blacks were consuming the stores which they had gathered from basswood.

G. M. DOOLITTLE.

Bees frequently work on it; and they surely would not work it for pollen alone in my location, where pollen resources are so great. I doubt, however, whether I ever realized any great amount of surplus from it.

E. E. HASTY.

No, not separate from white clover, as my bees work on both at the same time; that is, both bloom together here, and bees are seen working on both. My bees work well on the red clover some years when it is plentiful. I find that the dark or leather-colored Italians work on it much better than the bright yellow bees. Mr. Frank Boomhower, of Gallupville, N. Y., who advertises "red-clover queens," first got his stock from my apiary, when he said they were the first bees he ever saw work on red clover. b. I never get it separate from white.

A. E. MANUM.

The string of "noes" at the beginning would seem to indicate, either that red clover does not flourish everywhere, or that it does not yield honey very often. I feel like adding that the friends who say "no" have not observed as closely as some of us; may be, however, that last had better not be added. Muth says, "Once in a great while;" so we know he is pretty certain that he has had a good yield from red clover. Friend Freeborn once gave red clover the credit, but now thinks it doubtful. James Heddon has had only one good yield from red clover. Now, I am inclined to think, as in the question just before, that we are all indebted more to red clover than we know. In our locality you may go out into the fields in July, August, or September, and find Italians working steadily and busily on red clover, day after day, and week after week. And, while it gives a surplus only under very favorable circumstances, I feel certain that red clover keeps bees busy and out of mischief, and keeps brood-rearing going, and oftentimes enables them slowly to accumulate sufficient stores for winter, where it does nothing more. Ernest remarks that only last summer, the red-clover bloom gave enough honey so as to save quite a good deal in sugar feeding. The color and taste of the honey indicated pretty surely the source. In our locality, more or less red clover is always round about us, to the extent of perhaps 100 acres within range of the bees' flight, from which a good deal of clover seed is raised. What we call red-clover honey has a ranker taste than that from white clover. The color is a little greener. That a bee fills its sac from the blossoms of red clover, can be easily proven by dissection. You can also find the same honey by dissecting the clover-head. Sometimes the honey is scarcely perceptible, either to the taste or to the sight; at other times it seems to almost fill the tube of the blossom. At such a time, the bees work strong, and fill the boxes. A good yield of honey, however, from red clover, in our locality, is the exception rather than the rule.



Every boy or girl, under 15 years of age, who writes a letter for this department, CONTAINING SOME VALUABLE FACT, NOT GENERALLY KNOWN, ON BEES OR OTHER MATTERS, will receive one of David Cook's excellent five-cent Sunday-school books. Many of these books contain the same matter that you find in Sunday-school books costing from \$1.00 to \$1.50. If you have had one or more books, give us the names that we may not send the same twice. We have now in stock six different books, as follows: viz.: Sheer Off, Silver Keys, The Giant-Killer; or, The Roby Family, Rescued from Egypt, Pilgrim's Progress, and Ten Nights in a Bar-Room. We have also Our Homes, Part I., and Our Homes, Part II. Besides the above books, you may have a photograph of our old house apiary, and a photograph of our own apiary, both taken a great many years ago. In the former is a picture of Novice, Blue Eyes, and Caddy, and a glimpse of Ernest. We have also some pretty little colored pictures of birds, fruits, flowers, etc., suitable for framing. You can have your choice of any one of the above pictures or books for every letter that gives us some valuable piece of information.

#### A WHOLE PLATEFUL OF HONEY AT A TIME.

My uncle Joseph has 14 hives of bees. He has taken 50 lbs. of extracted honey, and 50 lbs. of comb. But the rainy weather has been a drawback on the bees. He expects to take a nice lot more; that is, if it doesn't rain too much. I never used to like honey till this year, because when my uncle first kept bees I ate a whole plateful and it made me sick. I have a little playmate who likes to eat salt on honey.

MABEL BRIGGS, age 11.

Cornwall Landing, N. Y., June 17, 1889.

#### PAPA'S GREENHOUSE.

Papa has a forcing-house. It is 12 by 34 feet. It is covered with glass, and heated by a furnace, on the return-flue system. It is a perfect success. He has a lean-to on it and half of it is covered with glass. In that he keeps his furnace, water-tank, and also has room to transplant in it. He has the beds in the other part. He has about 2000 once transplanted Grand Rapids lettuce-plants. He also has cabbage, cauliflower, and tomato seeds sown, and has radishes up. He gives us children one cent per 100 for transplanting.

LOVINA E. WHITNEY, age 10.

Independence, Iowa, Feb. 15, 1889.

#### BEES IN GERMANY.

Bees in Germany are doing very badly. My mother is there this year, and also my brothers, taking care of them. My mother is going to send me a photograph of our buckwheat apiary, of about 40 straw hives. You have no such hives in your A B C book as we have in Germany. My mother had the first swarm Pfingsten (Easter). She took some hives along, and other goods, to show the people in Germany. About half of our bees died last winter, for we had no one to see to them until mamma came out in spring. She is going to visit some large bee-men; and when she comes back I will send you a report of her journey. Papa is busy hiving swarms. He says the bees have no honey, and are doing little. Last year he and I extracted honey June 24.

ANNA BLANKEN, age 11.

Jersey City, N. J., June 26, 1889.

All right, friend Anna; let's hear from you again.

## PAPA'S BEES.

My papa has 56 colonies of bees. He has had three swarms of bees this summer. We had a cold dry spell, and they did not gather much honey. Papa had to feed some of them. One colony of papa's bees was attacked by what is supposed to be the nameless bee-disease; but he took out the old comb and put in others, and saved part of them. He made a swarming-box; and sometimes when you would think the bees had all gone into the hive, they would all be in the swarming-box. Papa gives me a penny every time I see the bees swarm first. Papa lost one colony of bees this spring, but he did not lose any last winter. He extracts the most of his honey, because people like it better that way, and it sells more readily. Papa has divided six colonies.

LILLIE SPRACKLEN, age 14.

Cowden, Ill., June 3, 1889.

## HOW FAR DO SWARMS FLY?

My brother has 40 hives. We have had a very long drouth. We had a good rain last night and this morning. The horsemint is in bloom. It was dying, but this rain will stop it. My brother has not had many swarms; but two ran away. Do you know how far a swarm flies? Mr. Stone, of Belton, was the first man that brought the Italians to this county. While increasing them a swarm ran away. A long time after, the swarm was found 14 miles from the apiary. No one knew the race of bees. Mr. Stone bought the swarm for \$5.00. My brother buys his supplies of you. He gets other bee-keepers to order with him, so as to make freight cheap.

I thought I would tell you about wild ducks. They build their nests in a hollow tree, and keep their eggs warm with down. They lay from 10 to 24 eggs. Their eggs are white, about the size of a pullet's egg. They prefer a tree that leans over the water to build a nest in. When the eggs are hatched, and the young ducks are about an hour old, the old duck takes them to the water. Then the drake helps to defend them. If any one comes near, the old hen will act as if she were crippled to get the one to take after her, then the drake will take the ducks to the bank and hide them. The young ducks are very wild. Before the young ducks are able to fly they dive under the water.

WM. MORGAN.

Belton, Texas, June 12, 1889.

## A LETTER FROM A LITTLE BOY IN SCOTLAND.

My father has given me leave to write a letter. Did you ever get a letter from a boy in Scotland? Our farm is in a glen in the highlands of Inverness-shire. We are near the big hills; they are covered with heather. It grows as thick as grass, and is awfully bonnie. We like the heather. It is red and purple, and some white. Father says you have no heather in America. I thought it was in every place. I am sure father would send you some to plant. It has a bonnie wee flower. I will tell you about father's bees, if you like.

JOHN STOKES, age 8.

Balnastraid, Carrbridge, Scotland.

We are very glad to get your letter, friend Johnnie. Although we have had juvenile letters from almost all parts of the world, we do not recollect just now of having received one from Scotland. We should very much like to see the Scotch heather, which you say, in your very expressive Scotch, is "awfully bonnie." No, we have no heather

in America, but we have heard a great deal of the heather honey, and we have tasted some samples. We have white clover, however, which we are proud of. Let us hear from you again. We like to hear from the little boys and girls, especially those who live on the other side of the "big pond."

## 700 LBS. OF HONEY FROM A SINGLE COLONY, ETC.

My father said that to every boy who writes a letter to you, you send a book. My father keeps bees, and I keep bees myself. I handle them. I have two sisters. One runs away from the bees, and the other don't. My father took over 700 lbs. of honey from one hive one season. I boxed a swarm of bees when I was three years old, and I have five swarms. I sold a swarm for £1.75, and bought a tricycle.

FRED W., age 8.

Adelaide, South Australia.

Seven hundred pounds of honey and over has been produced from a single colony and its increase. Such enormous yields are very rare indeed; still, it is not impossible that your papa took that much. We should be glad to hear more about it. As you have a long season, those 700-pound yields probably are not as scarce as they are in America. We should be glad to hear from some of our subscribers, especially the little folks who live in this portion of the globe. In regard to "boxing" a swarm of bees (or hiving, I suppose you mean) when you were only *three years old*, that is a little hard to believe. Little boys have a memory that is not always reliable; and one peculiarity of their memory is, that a thing is always greater than the real fact.

## BEE KEEPING IN MINNESOTA; SWARMING, ETC.

We live up away up here in Minnesota, where such bee-raising as we read about in your books is unknown. My father is an amateur bee-raiser. He has been a market-gardener for many years, and finally two years ago he thought he would keep bees in connection with his gardening. Two years ago he got two colonies, paying the sum of \$12.00 for them, and now we have ten colonies. As you wanted me to write the facts, here goes:

A year ago we wintered the bees in the outdoor cellar, and they wintered nicely. Last winter he dug a hole, with ventilation in the top, and buried them. But there were two weak colonies, and those they left in the cellar. My mother fed them honey, and they ate it all up. Then she bought patent syrup and fed them, and it killed every one. So do not any of your readers ever feed your bees on patent syrup.

Will any of your readers tell me why our colonies swarmed so early in the season when Mr. Levy has 60 colonies, and he hasn't had a new one this year? and another bee-man who has 50, and it is the same with him? But my father feels proud that he has had the first and only new colony in the neighborhood this year.

MISS EDNA SHAW.

Fountain, Minn., June 8, 1889.

We don't know what your patent syrup is; but we always recommend, for a winter food, granulated-sugar syrup. In regard to the swarming, perhaps your papa keeps stronger colonies, or perhaps your neighbors keep the swarming cells of their colonies cut out so as to discourage swarming.



## TOBACCO COLUMN.

### CONDITIONS UNDER WHICH WE GIVE SMOKERS TO PERSONS WHO STOP USING TOBACCO.

First, the candidate must be one of those who have given up tobacco in consequence of what he has seen and read in this department. Second, he promises to pay for the smoker should he ever resume the use of tobacco in any form, after receiving the smoker. Third, he must be a subscriber to GLEANINGS. Any subscriber may, however, have smokers sent to neighbors or personal acquaintances whom he has labored with on the matter of tobacco-using, providing he give us his pledge that, if the one who receives the smoker ever uses tobacco again, he (the subscriber) will pay for the smoker. The one who receives the smoker in this case need not be a subscriber to GLEANINGS, though we greatly prefer that he be one, because we think he would be strengthened by reading the testimonials from time to time in regard to this matter. The full name and address of every one who makes the promise must be furnished for publication.

#### THE PIPESTEM STICKIN' OUT.

My friend, your pipe we can not see;  
Hidden surely it must be;  
For while you travel round about,  
We see the stem a stickin' out.

Now, do you think it nice and wise  
To burn your nose and smoke our eyes?  
Then just you lug your pipe about,  
And leave the stem a stickin' out.

And if you think you're doing right  
To puff and smoke both day and night,  
Just bear your pipe with you about,  
And leave the stem a stickin' out.

Examples set to girls and boys,  
Although they spoil their life-long joys,  
And as you pass along the route,  
Just leave your pipestem stickin' out.

Thus as you lead the youth along,  
To practice what they know is wrong,  
They see the sign you bear about;  
It is your pipestem stickin' out.

At home, at church, or while abroad,  
The people all with one accord,  
With deaf'ning roar aloud may shout—  
"We see your pipestem stickin' out."

Now, if you would disgust us all—  
The old, the young, the large, the small,  
Just lug your pipe around, and shout,  
"Here! See my pipestem stickin' out."

Cedartown, Ga. J. M. H.

A neighbor of mine, through the influence of GLEANINGS, has decided to quit the use of tobacco. If you will send him a smoker I will be responsible. If he ever uses it again I will pay for it.

Anneville, Texas. G. H. REED.

One of my friends, Mr. Sievert Anderson, who has been a great smoker, has quit smoking, and says if you will send him a smoker to Newton, Benton Co., Oregon, he will quit; and if he ever smokes again he will pay you.

MRS. C. DIXON.

Newport, Oregon.

I promise to pay for the smoker should I ever use tobacco in any way again; if you will try me this once yet, I feel as if it would be the last time I should have to ask for human help.

Here is another who is no reader of GLEANINGS, but he says if you will send him a smoker he will pay 75 cts. for it if he ever uses tobacco again in any way. If he breaks his pledge I will see that he pays it. His name is Albert Sanders.

Fairfield, Pa. J. A. KIME.

I inclose 70 cents to pay for a smoker for myself, and also 20 cents to pay postage on a smoker for George James. Having used tobacco for 20 years he says he will quit; and I promise, if he ever uses it again, to pay for the smoker if he deserves one.

Denver, Mo. W. R. SMITH.

An old friend of mine, Mr. Crandall, who has used tobacco for many years, has quit using it. I have also quit, as I never used it very much. Now, if you think we are entitled to a smoker between us, please send it along; and if we ever use it again we will pay you the full amount.

L. W. WATTS.

Portland, Oregon.

HAS RESUMED THE USE OF TOBACCO, BUT PAYS FOR THE SMOKER.

GLEANINGS is always gladly received. Mr. Rolan Routen has fallen back to his tobacco, and sends you 70 cts. to pay for the smoker he got.

Henry, Tenn. R. F. CARTER.

Thanks for the 70 cents, friend C.—not because it is so much money, but because it shows that your friend is honest and square. We hope he will try it again, however.

I wish to join your anti-tobacco company, and I want a smoker, and then I shall be a smoker no longer. I have been using tobacco, though not immoderately, for several years, and I know it is an injury. I agree to all the conditions, so put me upon the list.

J. M. AKER.

Smithville, Mo., Apr. 25.

Friend A., where do you draw the line between "moderate" and "immoderate"? If, as you say, you used it moderately, and yet suffered from it, is it not true that the use of tobacco to any extent is an abuse of it, as it is with liquor?

Under date of May 9, friend A. says:

The smoker came this evening. Thank you. My time to stop smoking and chewing has begun, and I think I can be faithful. I never chewed or smoked extravagantly, but I have been at it thirty years or more, though I have quit several times, sometimes a year or two, in that time.

J. M. AKER.

Smithville, Mo.

I think that any man, by reading GLEANINGS, will be a better man spiritually if not financially. I have been smoking tobacco 25 years, and Bro. Morrow (the bee-man) told me I was smoking too much; and if I would quit you would give me a smoker; and in case you send me one, if ever I use tobacco again I hereby promise to pay for the smoker. I did not do this for the mere value of the smoker, for I don't suppose that money would have hired me to do so; but I believe that morally it is wrong; and, God being my helper, I'll never do it again.

Washington, Ark. H. B. TIMBERLAKE.

COMMENCES THE USE OF TOBACCO, BUT PAYS FOR THE SMOKER.

Mr. Ummel has been using tobacco again, and I send you one dollar to pay for a broken pledge. He does not use much, but I should like for him to leave it alone altogether. I have three boys and three girls, all under ten years of age. I should hate awfully if any of them should learn to use the vile stuff. I hate tobacco, and I will fight it as long as I live. Pray for us, dear friend; pray that my dear husband may see how wrong it is to use tobacco, and that he may have strength to leave it alone.

New Goshen, Ind. MRS. JOSEPHINE UMMEL.

**SPECIAL DEPARTMENT FOR A. I. ROOT, AND HIS  
FRIENDS WHO LOVE TO RAISE CROPS.**

**MARKET-GARDENING IN JULY.**

**O**NE of the venders of a recipe for making artificial honey once said, as a reason why people had better manufacture honey instead of having the bees gather it, that it required brains enough to run a cotton-factory, to produce honey successfully with an apiary of *beehives*. Well, may be he was not so far from right, so far as brains are concerned; although I believe it would take still more brains to humbug and defraud the public, and at the same time build up a profitable business. Well, I have been thinking, during this July, that it takes as much brains to run a market-garden successfully as to run an apiary; and it is right in the line of this matter of demand and supply that I spoke about last month. As an illustration: Last year we raised so many peas, and managed so awkwardly, that they ripened all at once, as it were, until nobody wanted to see another pea. Prices went away down, and beautiful stratagems would hardly bring enough to pay for picking and carrying around town. This year I thought I would profit by experience, and I did. Just as soon as one lot of peas was up, another lot was planted, or drilled in, rather, with a grain-drill. It is a great deal more trouble to get the drill out so many times, and drill only two rows or three, the length of the lot; but it does the business. This year we have not had a pea on the wagon that was old and hard. The reason is, that customers have been for six weeks calling for the peas a little faster than they ripened; and we have had \$2.00 a bushel for every peck we have sold, with the exception of a small portion of the first Alaskas. Now, my mistake was in not planting one row more when I did plant, so as to give our Medina people just enough. We could then have had good prices, and supplied all demand. It has been the same way with lettuce. During the last of June, we had great beautiful heads of Henderson's New York lettuce, about as solid and almost as large as cabbages. At 5 cents a pound it was very good business indeed. But we had too many of them *at once*. It did not run up to seed; but as we had so much wet weather the heads rotted at the center. When these great crisp heads of lettuce were just right, nobody would look at any other—not even the Grand Rapids. Several patches of lettuce that were grown with much care and pains, were never made any use of whatever. When the big-head lettuce, however, began rotting at the center, all other kinds began to shoot up seed; and in one week after having the market overstocked, we had no nice lettuce at all, and the price has gone up from 5 cents to 10 cents per pound. Now, to manage so as to have just enough of each and every product in the market-garden to supply the demand clear through the season the year round, is certainly a matter requiring much calculation and forethought. In fact, I should like to see the

man who could do it, even for a town of 2000 inhabitants, and make no mistake. It is just so with the plant-trade. This year we had a great quantity of tomatoes, and thousands are yet in the seed-bed, or, rather, where they were transplanted; but the late cabbages we did not get enough of, and lost quite a good many orders. The Jersey Wakefield was a little overdone. By the way, the finest and hardest heads of cabbage we had last year to winter over were the Jersey Wakefield and Winningstadt. They kept over winter, in fact, a great deal better than Flat Dutch, and cabbages of that sort. Last year we managed cabbages so as to have not only enough, but too many, and many of them burst and went to waste. We made sour-kraut of them, but the sour-kraut did not all sell. This season, as with the peas, we went to the other extreme. We have not had enough cabbages for the demand so far. The consequence is, we are still getting 5 cents a pound for choice hard heads of Jersey Wakefield, even now during the middle of July. We are so well pleased with friend March's strain of Jersey Wakefield that we planted some seeds the first of July. The plants are up nicely, and will be put in the field during the last of July. We expect these will make nice heads to winter over; and if the price in the spring is not well up, we shall try planting some of our own so as to raise our own seed.

We have had more trouble this summer than ever before, with early celery running up to seed. We thought at first the fault was in the seed, and were going to complain to Peter Henderson because his White Plume ran to seed more than it ever did before. But when the Boston Market, Self Blanching, Golden Dwarf, and, in fact, the whole of them, ran up to seed, instead of making celery, as they have former seasons, we decided that it was the fault of the season. If any reader of GLEANINGS has a strain of celery (it ought to be White Plume or Self Blanching) that is especially adapted for getting early celery so as to put it on the market in June, he would confer a favor on us by sending us samples. We usually have celery on the market during the last of June; but our customers have not had a bit so far at this date, July 9.

**THE BEST EARLY STRAWBERRY.**

I told you a month ago, that the one fact that the Jessie furnishes strawberries in every respect equal to the Sharpless, but a week or ten days *earlier*, was of itself a sufficient reason for giving that variety prominence. Well, after our strawberries were all picked I happened to go out to that nice patch of Jessies that I told you about; and what do you think? Why, it was pretty well covered with berries, when there was not any other strawberry on the place, with one exception. These later Jessies are not so awkward in shape as those first ripening were. They are nice and round, red all over—excellent in flavor, and sold readily for two cents a quart more than the black raspberries. Now, this may be caused partly by the way in which this bed has been cared for. The runners were kept off, and



the furrows between the beds have carried off the surplus water from our tremendous heavy rains. Have others found the Jessie superior as a *late* berry, as well as an early one? I spoke of one exception; this is the Gandy. The first ripe berry I found was in July. They are of good shape, and it is in every respect a good berry; but the few plants we have did not bear much fruit; and may be very late strawberries never do yield as much as the early ones. It is also very slow in putting out runners—so much so that the price of plants ought to be pretty high if they will behave as our Gandies do.

EARLY ONIONS, TO BE SOLD IN BUNCHES.

For a number of years we have sold great quantities of bunch onions; but I have been in the habit of using good-sized sets for the purpose. Years ago I bought quite a lot of good-sized Yellow Danvers sets; in fact, they were onions too small to sell, taken from those raised in the field. The swamp garden was almost filled with these. Well, like the celery, "every last onion" put up a seed-stalk. We cut off the seed-stalk, but that did not work very well. The onions are tough, and it is a good deal of work to peel them, so as to make them nice and handsome. Now, one of the boys planted a single row of White Victoria, furnished by Burpee. These were planted ever so much too thick, and we were too busy to thin them out. One day our hotel wanted some small onions, without bulbs, to put in glasses. I suggested to the boys that they thin out the White Victorias. These filled the bill exactly, and went off readily at 5 cents a bunch. The bunches hardly weighed half a pound; while of large coarse onions we gave a whole pound for a nickel. Well, these White Victorias do not have to be peeled at all. Just pull them out of the bed by the handful, and they are as white as snow, a ter we rinse the dirt off. Just tie a string around a good handful, clip the tops off so as to make them look even, slice the long slim roots off with a knife, and they are ready for the table. They are put on the table in long glasses, the bottom part uppermost. One could raise these onions by the million, at very little expense; but, like the peas and other things, we want to sow a few at a time, and keep up the succession. By the way, the Silver King, White Victoria, and the White Pearl onions, are all of them greatly superior for market-gardening; but they must be pulled and sold as soon as they are fit. If you try to stow them away, or keep them, as you do Yellow Danvers, Extra Early Red, or even Silverskin, you will come to grief. They will rot in spite of you, if you do not use them when they are ready to be used.

Now, it is a complicated matter, and requires much judgment and care, to have things come along in succession so as to be just the proper age at the time wanted, at the same time having enough and not very much too many. But it is a pleasant exercise for the mind and also for the body, and I do believe that quite a large and profitable business can be built up in almost any town where one will go at it in the way I have indicated. You may say your folks won't

buy onions and lettuce in July and August; but I haven't a doubt but that I could show you your mistake in short meter. The goods must be presented to customers in attractive shape. During this hot weather we have wet cloths constantly over every basket. If you let the sun shine right down on your lettuce, onions, or even into the potatoes, just a little while, it makes them look unattractive, and they are not as nice for the table. We are located within half a mile of the center of our town; therefore the wagon seldom goes over a mile in any direction; and during berry time we have found it much better to make frequent trips back to the garden. We are now getting raspberries at the rate of six or eight bushels a day. We get 8 cents for black ones, and 13 for the red ones. By choosing the right varieties these can be made to ripen in succession so as to avoid having a great lot on hand all at once. We have decided to can them before we will sell them at a less price than six cents a quart. We have been obliged to can only 2 bushels yet, which was Saturday night. It is an excellent idea to be able to tell customers that you propose canning before you will go below a certain price. Thompson's Extra Early Red raspberry ripened a little after the middle of the strawberry yield. The Turner came next, and now Cuthbert is beginning to ripen. Shafer's Colossal ripens last, and holds on a long while. The Doolittles are our first black raspberry. The Gregg comes in just after the Doolittle begins to fail. Then come blackberries. The Early Harvest begins to ripen before raspberries are gone. The Snyder is the one we use for the greatest crop.

This year we keep accounts with our berry-pickers by means of a blackboard. It is hung on one of the shutters used for our cold-frames. When a child brings in a basket of berries, the foreman gives him credit on the blackboard, which is right before his eyes. If the foreman does not do it right, the child makes his complaint then and there, and it is clearly understood that, if the picker assents to the figures on the board, there is to be no more talk about mistakes or omissions. Every picker brings in his berries, and sees his credit put down. He also sees how many quarts his comrades are getting, compared with his own. If he is visiting or playing, instead of "tending to his knitting," the blackboard record points the finger of reproof at him. Sometimes the foreman pleasantly explains to the younger ones, "My young friend, the reason why you do not make as good a record as the others is because you have been telling too many stories." The foreman examines the work of every picker; sees that he does not get green ones, leaves, etc., and also insists on having the bushes picked clean. The temptation to pick green ones in order to get along fast is considerable; but once in a while a child has to be sent home for the rest of the day, because he persists in getting green berries. The blackboard is one of the kind that rolls up so it can be unhooked from its nail, and carried in at night, or when rain comes up.

July 10:—Did you ever! When we decided to can our raspberries if they would not bring 6 cts. a quart, we had more orders than we could fill at 7; then we came up to 8, and we had more orders than we could fill, even at 8. To-day we are charging 10 cts., and the berries do not ripen fast enough to supply the demand, even at this price. It seems to me here is a lesson, not only for berry-producers, but for honey-producers as well. Do not be in a hurry to sell your product, and do not make contracts very much ahead.

#### THE BUSH LIMA BEANS AT THIS DATE.

I told you, in our last issue, that the Minnesota lima beans were all climbing poles. Well, one or two of the Kumerles are now sending up strong shoots, away up into the air, twisting themselves about in a spiral fashion, as if they could do a good job of climbing if they had a chance. Well, they are going to have a chance. Last of all, quite a few of the Henderson bush limas are also sending out shoots to climb poles. Now, friends, let us not be in haste to say hard things about the seedsmen. A quarter of an acre of our white kidney beans that have for years behaved themselves exactly like a bush bean are sprawling all over the ground, almost exactly like a patch of pole beans. Is it possible that the exceedingly damp weather has started such a rampant growth that the beans are all turning out climbers, and the celery and onions are all sending up seed-stalks? It certainly looks a good deal that way.

## OUR HOMES.

God hath put all things under Christ's feet, and gave him to be the head of all things over the church, which is his body, the fullness of him that filleth all in all.—Eph. 1: 22, 23.

#### WHY SHOULD I UNITE WITH THE CHURCH?

**B**EFORE taking up the subject indicated in our text, I wish to give you a glimpse of a letter just at hand. It is so perfect a supplement to the sermon, that it almost seems as if the two writers had been talking the matter over.

Mr. Root:—GLEANINGS for July is received, and I have just finished reading your article on "Love your Neighbors." I want to tell you how I tried to keep Mr. A. from subscribing to Bee Culture. While I was away, some one sent him a swarm of bees in a very old hive. He made two nice bives; and before he could get the bees in one he was taken sick. Knowing how much he thought of them, I took as good care of them as I could. When he was fully restored in mind, he began to be interested in his bees again. Now, you know we had lost every thing, and a dollar was as big to us as a "cart-wheel," especially as we had been to so much expense during his five months of sickness, and he still unable to attend to business.

I forgot to tell you in the start, that my husband was an ungodly man, and an unbeliever. As I said, he "got" interested in his bees, and nothing would do but he must send for frames, a smoker, etc. You, I believe, sent him a sample copy of GLEANINGS, so he must subscribe for that. I told him we

could not afford it, as the bees had cost him enough already. But he did, and the very first number was of untold value to us, especially for the article in "Myself and my Neighbors." It came right in the midst of a great revival. I had been unable to get Mr. A. out to preaching; but before the meetings were over he made a complete surrender to Christ, and is now an earnest worker in the cause. I do not think GLEANINGS comes half often enough for me. During the meetings there were a good many who could not see their way clear. GLEANINGS was handed around like a tract, or religious work, and was quite a help. I think the article in that especial number was, "Am I a Christian?" Would that all business could have Christ in it! I just felt drawn to you in Christian love on reading the article in the July number, and thought I must write and tell you how much I enjoy your paper, thinking it might be a help to you in writing for the August number. Now, Mr. A. has to go off for the summer. He will be in New York in July, August, and September, and I shall have the care and anxiety of the business as well as of the family, and I want your prayers that the Lord will be with me, and that I may be able to trust him fully to care for me. We had friends to help us in our trouble, and now I think we shall get on nicely. Please excuse this effusion, and don't let it fall into the hands of Blue Eyes, or the printers. MRS. J. P. A.

You will notice in the above, that my good friend says, "Do not let this get into the hands of the printers;" but knowing how such encouraging words as hers incite us all to renewed efforts, I have taken the liberty of disobeying, giving the initials only. You will notice a reference in her letter to an article in GLEANINGS for May 15, entitled, "Am I a Christian?" This sermon was followed shortly after by another one, in substance covering the head of this talk to-day—"Why should I Unite with the Church?" I have been for some time thinking of giving this talk also; and the above letter, telling how it was passed around from one to another to read, has decided me to do so. I am the more glad to give it, because the matter has come up at different times among the readers of GLEANINGS, and I know there are quite a number who have had quite a bright experience to start with; and yet, by putting off uniting with the church, they finally begin to delude themselves with the idea that they can be just as good Christians without taking any public stand with the people of God.

And the Lord added to them day by day those that were being saved.—ACTS 2: 47 (R. V.).

The translation of the Revised Version is preferable here, because of its more accurate rendering of the closing words of the verse. The Authorized Version translates: "*Such as should be saved.*" But the term in the Greek is a *present participle* (*sodzomenous*), signifying, not future, but present attainment—"Those who were being saved," or, "Those who were getting themselves saved." There is another difference in the two Versions. The Authorized Version, upon the basis of the "Textus Receptus," translates, "And the Lord added to the church." But there is a difference of opinion whether the words *ta ekklesia*, "to the church," should be retained or not. They are sustained by good authority, and there is good authority for their rejection. But,



whether retained or not, the meaning is the same. This meaning can be most clearly set forth by a combination of the two translations, reading thus: "*And the Lord added to the church day by day those that were being saved.*" That is, as fast as men were converted, day by day, they were received publicly into the company of the disciples, who constituted the church of God.

We need to understand clearly, as the connection so plainly shows, that the *visible* church is here meant, and not the *invisible*. In the 41st verse we read: "And they that gladly received the word were *baptized*; and the same day there were added unto them about three thousand souls," clearly referring to the converts of the pentecostal revival, who were already members of the *invisible* church, and indicating their public reception, by baptism, into the *visible* church. It was to the company of the disciples, thus increased, that there were added, day by day from that time on, such as were being saved, and were thus made ready for reception into the visible church.

Upon the basis of this apostolic example, I wish to rear a superstructure of answers to the question: "*Why should those who consider themselves Christians unite with the visible church of God?*"

I. A first answer to this question is, *Because church-membership will help one on in the Christian life.*

In speaking with a young convert recently, I said to him: "Now you must join the church at the first opportunity." He replied, "Don't you think a person can be a Christian without joining the church?" A few days afterward while calling upon a lady, I remarked: "You are a church-member, I presume."

"No," she replied, with a toss of the head, "I am not."

"You have sometimes thought of your duty in this regard, have you not?" I asked.

"Oh! I consider myself to be a Christian, and have for a long time," she replied; "but I don't see what's the use of joining the church."

"Why not?"

"Because I can be just as good a Christian without, can't I?"

These are individual examples of opinion upon this subject that are more prevalent and popular than we are accustomed to think. After we have made due allowance for those who *will talk* and must say *something*, there are a large number who find a stumbling-block just at this point, and need to be carefully conducted around it, lest they fall by the way.

To this end, let us first answer the two questions that are asked above.

To the first, *whether one can not be a Christian without joining the church*, I would reply, I presume he can. I would not deny the *possibility* of the case, any more than I would deny the possibility of one's being loyal to his country, in war times, although he may fail to go to the front when men are needed there. Joining the church does not *make* one a Christian. It presupposes that he is *already* loyal to his Lord and Savior Jesus Christ. It does, however, *bring him to the front* in the Lord's warfare. Now, although there exists a *possibility* of a man's being a Christian without joining the church, yet I must confess that I never could understand how a man can be *loyal to Christ and not want to be at the front*, any more than I can under-

stand how a man can justly claim love to his country and loyalty to her cause, and yet hide in the woods to escape being drafted. It does seem, that if one is *really a Christian* he will *want* to come to the front and join the church.

In answer to the second question above, *whether one can not be as good a Christian without joining the church*, I would reply, *No!* Membership in Christ's church *helps* us in the Christian life. By means of her fellowship we get *stimulus* and *strength*. We thus bring ourselves into association with those who have the same cause at heart. It contributes to the increase of one's *zeal*. The sharp click of the flint against the steel produces the spark. Love to Christ, brought in contact with love to Christ, produces Christian zeal. If you try to keep a fire alive with a single stick it is almost sure to go out. If you want your spark of patriotism kindled into a flame, go to the front: join the company of those in actual service; drill with them; fight with them; join in the songs of victory; and you will conclude that you never knew what patriotism was before. Don't boast of loyalty to the Master's cause when you are drilling in the company of the stay-at-homes. Not only go to the front in the Master's service, and report for duty, but get a place in the fighting ranks. Join the advance guard, if you can. Those who are stationed in the rear are most apt to flee when the shot and shell fall thick and fast. In the onward march, the rear guard have the greatest temptations to become, first stragglers, next deserters, finally traitors. If a man is in the front ranks, it is next to impossible for him to desert, for he is so surrounded by the loyal and fighting host that he can't fall back, and must move forward. Other things being equal, have you any doubt who will make the better soldier and will accomplish most for his country's cause—the man who thus bravely goes to the front, or the man who holds back and urges every excuse for staying at home? Who, then, will make the better Christian, the one who joins the church—the advance guard of Christ's forces—or the one who does not? Can you not see that you would gain *help* in the Christian life, and would make a better soldier of the cross, if you joined the church of Christ? Especially if you feel your own *weakness*, and *lack of faith*, and need of *Christian help*, and have any *fears that you may not hold out* in the Christian life—you should then by all means join the church, and gain a place in the foremost ranks. Men have said, at the beginning of battle, "Now I am going to get awfully scared, and may try to run; but don't you let me. You're an old hand at it, and are sure to stand. Now just keep me in place and don't let me become a deserter." Just so, many a young soldier of Christ, when fearful and about to retreat, has been *kept in place* by the veterans who fought beside him and urged him on, when, if he had not stationed himself there he would have yielded and fled from the field disgraced. If one loiters in the *rear*, who is there *behind* him to urge him on? We must not spend our time picking out trees behind which we are going to dodge in case we are defeated. Armies sometimes spare a fort they have captured, because it will make a good place of refuge in case they have to retreat. But the Christian soldier has no business to plan for failure. He should rather burn the bridges behind him, and thus render it impossible to retreat. Talk of *backsliding*! You can't slide

back unless there is an *inclination in the backward direction*. Join the church, place yourself in the front ranks, stand beside the veteran in Christ's service, and you will find it a wonderful stimulus and help in the Christian life.

II. Another answer to the question why you should join the church if you consider yourself a Christian is, *Because you thus identify yourself with the instrumentalities God has ordained for the advancement of his cause on earth*. There can be no question that Christ planned the establishment of the church, and that he ordained it to be the center of all activity and endeavor for the advancement of his cause. He said to Peter: "Upon this rock I will build my church" (Matt. 16: 18), thus promising an institution the basis of which should be a confession in him as the Son of God. He commanded regarding an offending brother, brought before two or three witnesses: "If he shall neglect to hear them, tell it unto the church; and if he shall neglect to hear the church, let him be unto thee as a heathen man and a publican" (Matt. 18: 17)—thus providing for a visible church which should judge whether a man were a true member of the invisible church. The company of the disciples whom Christ gathered around him were the nucleus of the church that was to be established by Christ, through the Spirit, at the season of pentecost, from which time on those who were converted were further added by the Lord unto the church. The *invisible church* is the *true church*, cleansed and purified and sanctified, and therefore it can not be to this but to the *visible church*, that Paul refers when he says that "Christ loved the church, and gave himself for it; that he might sanctify and cleanse it with the washing of water by the word, that he might present it to himself a glorious church, not having spot or wrinkle or any such thing; but that it should be holy and without blemish" (Eph. 5: 25-27). It is quite popular to say that Christ did not institute the church; but, like a great many things that are popular, it is very far from the truth. The church is the recognized means for the advancement of the kingdom of Christ. It was his *disciples* whom he commanded: "Go ye into all the world and preach the gospel to every creature." The visible church is the *organized army* of Christ. It is our place, if we would do our noblest for Christ, to be found in it. It may have unworthy members; there may be found within it enemies and traitors and spies; but that is no reason why we should not be found there. So much the more reason why we should join the ranks and counteract the influence of these who profess to be Christ's and are not. What would have been thought of a man who, in our nation's last great contest, should have said: "Why, ycs! I am in favor of the *Northern cause*, and *opposed to secession and slavery*. I believe the former should be put down, and the latter abolished. But I think I can do more good in the army of the South than I can in the army of the North. I will serve there, and try to win men to the Northern cause. I will persuade them to desert, and join the Northern army. I can do more good by going among them as though I were one of them. I will find out their plans, discover their strongholds, and report them to the other side"—would not one of two things be true—either such a man would not be looked upon as loyal to the North, and his words would have no effect in winning men from the South, or he would be considered a spy, and the

enemy would carefully conceal their plans from him, and he himself would be cast out? Those who claim to be Christ's, and yet march with the world, upon the plea of the greater good they can do, will meet with similar results. Men of the world will say of them: "When they talk to us of joining the army of Christ, they don't mean what they say; for do you suppose that, if they were loyal to Christ, we should find them in our ranks? Not by any means!" Or they would say, "These men are spies. They are working for the other side, and are among us only to find out our plans and discover our strongholds. We must look out and conceal our purposes from them." In either case, those who would influence the world by marching in their ranks, fail of their purpose. Either their *sincerity* is called in question, or they are thwarted because their *true purpose* is suspected. Either men will *distrust* them or they will *not confide* in them. Christ may want spies to spy out the land, but he will choose them from his own ranks, and not from those who are marching with the enemy. If you would do something for Christ that is worth doing, join his regular standing army, and get your commission for service there. There is advantage in guerilla warfare when it is directed by the general in command, but otherwise it may do more harm than good. If you would accomplish your best work for Christ you must join the visible church of Christ.

III. Another answer to the question why one should join the church is, *Because by that means alone can we let our lights properly shine for Christ*. A gentleman said to me, "I call myself a Christian; I try to throw my influence on the side of right—what more is to be accomplished by joining the church?" The gain is, that until one joins the church the influence of his life can not be said to be *all* on the side of Christ. For example, I know a man of upright life, honest and moral, who called himself a Christian, who wanted to do all he could for Christ, who nevertheless had not seen his way clear to join the church. He thought that he was doing all the good he could, and was influencing other lives for Christ. I discovered a far different state of affairs. I found that unconverted men were pointing to him as their example and excuse. They were saying of him, "There's the man I pattern after. If he can be as good a man as he is without religion, I'm willing to take my chances." That man was letting his light shine before the world, but he was not letting it shine *for Christ*. He was in reality *against* Christ instead of *for* him. He was not setting up a righteousness of his own, but he was leading men to *think* he was, and so was exerting an influence against the Master's cause. The enemy were counting him on their side, when he counted himself on the other side, and all because he did not come out and unite with the church and proclaim where he stood. It was for self and Satan that his light shone, and not for Christ. Christ says, "Let your light so shine before men that they may see your good works and glorify—not you, but glorify—YOUR FATHER WHICH IS IN HEAVEN." No matter how large and glaring a watch-fire you may build, and no matter what your purpose may be in building it, if you build it in the enemy's camp it shines to their advantage, and to the disadvantage of the forces of truth and righteousness. If you would make sure to cast no uncertain ray of light, you must at once pitch your



ment among the loyal forces of Christ, otherwise you may *mislead* men rather than *save* them. If you are going to build a fire upon the shore, so that some lone fisherman, lost in the darkness upon the sea, will be attracted by it and steer toward it, it makes all the difference in the world where you locate it. You may *think* that you know a *better* spot to place it than that where it is usually built—it *may* be a *loftier* place, and the glare of the fire may reach out further across the sea—yet *how do you know* but that in steering for that point the vessel may be dashed to pieces upon the hidden rocks, while the path of the sea is *clear* to the other point? If hundreds of fishermen have been guided aright by the light when stationed at the accustomed place, is it not wiser to build there than to risk the dangers of another and an untried point? The church is the *lighthouse* of God. If you have a brilliant light place it *there*, and not upon another rock, or you are almost sure to mislead the seaman who is seeking guidance to the harbor of peace.

IV. Still another answer why, if we are Christians, we should join the church, is, *Because it's our plain duty, Christ has commanded it*; and when Christ commands, there can be no question as to what is right. Do you ask a place in the Bible where he commands it? Turn to Matt. 28:19. There you read: "Go ye therefore, and teach all nations, baptizing them;" or, "make disciples of all nations, baptizing them." The followers of Christ are commanded to "disciple," or "convert," all nations; but they are just as plainly and emphatically commanded to "baptize" them. Both obligations are placed upon them. Now, if it was the duty of the disciples to baptize their converts, inversely it was the *duty of the converts to be baptized*. Read this same command as given in Mark 16:15, 16: "Go ye into all the world, and preach the gospel to every creature. He that believeth and is baptized shall be saved." We hold, of course, that those who believe and die without the opportunity of being baptized, are saved; but who can doubt, from these passages, that it is the *duty* of those who believe, *to be baptized*? Now, what is baptism, objectively, but the mark of reception into the visible church? The command, then, to be baptized, is identical with the command to join the church.

Take into consideration another passage: Paul, in the words of the institution of the Lord's supper, quotes from Christ the command: "This do in remembrance of me" (I. Cor. 11:25). Every disciple of Christ is directed to "show forth the Lord's death" by participating in the celebration of the Lord's supper. Now, there are many who believe that none should partake of the Lord's supper unless they have first become members of the visible church of Christ. That is my belief. The sacraments of the church should be confined to the members of the church. Especially if one neglects or despises church-membership, I doubt if he has a right to this sacrament which Christ instituted for a remembrance of himself. How, then, can one obey Christ's command to thus "show forth his death" unless he joins the church? He is simply *living in disobedience* to one of Christ's plainest commands. Still another passage demands our consideration. In Matt. 10:32, 33, we find the words of Christ: "Whosoever, therefore, shall confess me before men, him will I confess also before my Father which is in heaven. But whosoever shall deny me before men, him will I also deny before my Fa-

ther which is in heaven." Who, after reading those words, can dare to hope that Christ will confess us before the Father if we do not confess him before men?

"But," you say, "I confess Christ with the *life*, and not with the *mouth*—actions speak louder than words."

So far, so good. We don't want the mouth-confession without the life-confession, to be sure; but *Christ wants both*. In this plain passage, we have no right to read different meanings into the word "confess," according as it is applied to *ourselves* or to *Christ*. When Christ says, "Him will I confess before my Father," he means a confession of the *mouth*. So when he says, "Whosoever shall confess me before men," he likewise must mean a confession of the *mouth*. If we expect that Christ will say of us, before the hosts of heaven, at the last day, "This is my child," we must say of him now, before men, "This is my Savior."

Now we are ready to read that wonderful passage in Rom. 10: 9, 10, and read it understandingly: "If thou shalt confess with thy mouth the name of the Lord Jesus, and shalt believe in thine heart that God hath raised him from the dead, thou shalt be saved. For with the heart man believeth, but with the mouth confession is made unto salvation." You can fully obey the commands of Christ only by coming out boldly before the world and joining the church on *confession of your faith in Christ*. To confess Christ by the daily life, to speak a word for him in private, to take an occasional part in the service of prayer—all this is excellent, but not sufficient. If we would be partakers of the *full and free* salvation of Christ, we must make the freest and fullest confession of him, before the world, that it is possible for us to make; and to this end we must be added unto the church with those that are being saved. Thus does it become us, in imitation of Christ, to fulfill all righteousness.

The answers to be given to the question, "Why should those who call themselves Christians join the church?" are thus seen to be:

First, because the church-membership helps one on in the Christian life.

Second, because one thus identifies himself with the means God has ordained for the advancement of his cause.

Third, because thus alone can one let his light fully shine for Christ.

Fourth, because it is a plain duty, Christ having commanded it.

These answers should come with convincing force to three classes:

First, to those who have just started in Christ's service. Shall such join the church? By all means! Where else could they go? Where shall the prodigal return but to the father's house? Where shall the reclaimed lamb be taken but back to the fold from which it had wandered, and there be safely sheltered within? If left without, it is almost sure to wander away again. Some question whether it would not be better for them to wait awhile, to see whether they will persevere in their Christian lives. Emphatically, *No!* That is planning for defeat. Leave the lamb without the fold over night to see if it is inclined to run away again? Others think that they will delay until they feel more *worthy* to come. If they wait for that, we *hope and believe* that they will never come. We never *want* to feel

worthy of joining the church. It is not that we are worthy, but that Christ who died is worthy, and we come in his name. We do not profess to be *sinless*, but *sinners saved through Christ*. If there is in the heart a godly sorrow for the past, a sense of sin forgiven, and a firm determination to serve Christ in the future, then you should come at the first opportunity and offer yourself for reception into the church of Christ. It is *always a mistake to wait*. Your duty is clear. "This do"—and there can never be any good excuse for the neglect of a plain duty. It is your duty to join the church, and the first opportunity is the Lord's time for the performance of that duty.

Second, to *Christians in disguise*, sometimes self-styled "secret Christians." Yet what a secret Christian is, I hardly know. Christ says: "No man, when he hath lighted a candle, covereth it with a vessel, or putteth it under a bed; but setteth it on a candlestick, that they which enter in may see the light" (Luke 8:16). What can be the object of having the light of a Christian hope lighted within the heart, and then covering it up so that no man can see the light? Is it because ashamed of Christ that such as these sometimes conceal the light? "Who-soever shall be ashamed of me and of my words in this adulterous and sinful generation," says Christ, "of him shall the Son of man be ashamed when he cometh in the glory of his Father with the holy angels" (Mark 8:38). How can a man be Christ's and not want others to know it? One would think that he would want to proclaim it to all the world, if really and truly a "child of the king." Such as are engaged in seeking a place in which to hide their light, either never were Christ's, or have ceased to be Christ's, or will soon no longer be Christ's. Hiding a light beneath a bushel not only keeps it from shining, but also causes it to grow dim, and at length to go out. You must place your lamp upon the high stand of a public confession of Christ, if you would have it truly shine for him.

Third, to *lapsed members*. How many there are, who were once church-members, who now are not! Ask them whether they are members of the church, and they will answer that they are. In reality they are *lapsed members*. This comes about in various ways. Many change their residence, and fail to take a letter of dismissal with them, because, as they say, they "expect to go back some time." Thus they are classed as "absent members," and at length their names are stricken from the list. Church-membership amounts to nothing after one has been absent a year or two. Few churches would count such an absentee a member at all. Others go to another place to reside, expecting to stay, and take a church-letter with them, but neglect to present it to any local church. Such can be classed, if at all, simply "pocket members," or "bureau-drawer members." They are placing a "pocket veto" upon the law of church-membership enacted by Christ. There are people in every community who are in reality Christians, who are ranked as "non-Christian" because they have failed to unite with any local church, and thus let people know where they stand. It is just as much our duty to *keep up* our membership in the church of Christ as it is our duty at the first to *join* the church of Christ. Neglect of this duty is the first step toward carelessness in the discharge of other Christian duties, and indifference toward the interest of Christ's cause in the community where we dwell.

I have thus plainly presented the reasons why, if you are a Christian, you should be a member of Christ's church. I beseech you to weigh them, and not to dismiss them from your mind, as you value your soul and love Christ's cause, till you have seen your duty clearly in this regard. Behold the truth as it is. Pray God for guidance. Determine that you will fully confess Christ before the world, and thus become a part of the church which he loved, and for which he gave himself, that he might sanctify and cleanse it, and at length present it unto himself without blemish. And the God of all peace abide with you evermore. Amen.

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## OUR OWN APIARY.

CONDUCTED BY ERNEST R. ROOT.

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### SWARMING, FOUNTAIN PUMP, ETC.

**D**URING the last week or ten days we have been having an unusual amount of swarming. Beginning with the 4th of July, the weather, instead of being stormy, has been fair, and every thing has been favorable for the secretion of nectar. Honey has been coming in at a faster rate than we have seen it before for several years. We have had an average of about seven swarms a day, and Sunday has been no exception. Mr. Spafford had about all he could do to take care of the apiary, and fill orders for bees and queens, to say nothing about bothering with swarms. Your humble servant has been obliged more than once to leave matter for GLEANINGS heaped up on his desk, and go out to the apiary to help Mr. Spafford. Sometimes we had three or four swarms in the air at one time. One day after I had waited half an hour, or twenty minutes, for a swarm to cluster, and still they were flying around without showing any disposition to settle, I became disgusted. The fountain pump had been recommended, but heretofore we had never given it a trial, although good bee-keepers like James Heddon and others had recommended its use. A pail of water and a fountain pump were procured. "Now," thought I, "we will see whether you'll settle or not." After quickly adjusting the spray nozzle, I began pumping the spray among them where they were flying thickest. Sure enough, it had the desired effect. After about half a pail of water had been thrown, some of the bees began to settle on the grapevines. When the entire contents of the pail were exhausted, there was a decided settling on the part of the bees. Laying down the Whitman pump I grasped the Manum swarming-arrangement (which is always in sight), jarred the bees into the basket, and had the satisfaction, in a few minutes more, of seeing the cluster hanging from the basket.

On another occasion two swarms came out almost simultaneously, from hives remote from each other. As the bees from each soared into the air, I perceived that they were gradually circling together. "Now," thought I, "I will see if I can not separate you, or, rather, prevent you from ever getting together." I began spraying the outer edges of the flying bees of the



swarm in the air, nearest to me. Those bees receiving the spray began to retreat very perceptibly. I followed up my advantage until I had them driven quite a little distance away. The other swarm, in the meantime, was coming up. I began dousing them in a similar manner, and soon had the satisfaction of seeing them retreat. Each was then sprayed, when they were hived, as before explained.

Last Sunday, the 7th, before I had a chance to get my breakfast, a swarm was out. Before I had got them fairly hived, another swarm came out. I was about to hive these, when Mr. Calvert (my brother-in-law) came to spell me. It had been previously arranged that I was to take care of the bees in the forenoon, and our Mr. Spafford in the afternoon. Some three or four swarms had come out during the morning. After breakfast I relieved Mr. Calvert, and, with lesson-helpers in hand, I perched myself under the shady veranda of the house-apiary, in full view of every colony in the yard. As I studied about Samuel, my eyes now and then took in a survey of the apiary. Fortunately the bees behaved themselves for a full hour. When church was out, Mr. Spafford relieved me. On returning from Sunday-school we found some swarms had come out, and that one was already in the air. This one seemed determined to alight upon the top of an evergreen-tree. Now, none of us relished the idea of climbing this tree, with our nice Sunday clothes on. Accordingly, I removed the spray nozzle of the Whitman fountain pump, and screwed on the stream nozzle. Although the bees had formed quite a little cluster, I felt pretty sure that I could dislodge them. I began to shoot a solid jet of water directly at them. This had the effect of stopping the bees from clustering there any further, as well as having the other effect of dislodging some of those that were already on. I could not dislodge the latter entirely, and left them, as I noticed that the rest of the swarm seemed to think this was not a desirable place, dripping as it was with great drops of water. They started to cluster upon another spot, not exactly an accessible one. The stream nozzle was directed at them as before. Again they took another position, and very soon we had a nice cone of bees hanging where we could reach them easily with the Manum swarming-basket. After about half the bees had settled, the cluster was jarred into the basket, which was then closed. The tripod was then adjusted, and soon we had the satisfaction of seeing the swarm hanging right from the swarming-basket instead of from the top of the evergreen.

Besides the facility with which a swarm may be induced to settle by the use of the fountain-pump, and besides the other advantage of dislodging them from an almost inaccessible position, it may be used to very good advantage in preventing bees from clustering upon their former point of attachment; that is, the place where they had previously been clustering. After shaking the bees into the Manum basket, there is always about half of the bees that persist in

clinging to the old limb. I found that, by dousing it thoroughly with water, the bees will let it alone entirely, and soon cluster on the basket, just where they are wanted.

#### DRIVING A SWARM IN THE AIR LIKE A FLOCK OF SHEEP.

The feature of being able to drive a swarm like a flock of sheep is a valuable one. Some of you may doubt this; but I assure you I have been successful thus far in driving and cornering up whatever swarm I experimented upon. This morning a swarm of some eight or ten pounds of bees was making straight for a hickory-tree on the outside of the apiary. This tree is some forty or fifty feet tall. I hallooed to Fred, a new hand in the business, to run around them and head them off with the fountain pump. He did so, and it made me feel—well, *real good* to see them halt, then retreat before the spray and finally settle where we wanted them to. Another swarm started to leave the premises, evidently with the full determination of making straight for the woods. The fountain pump was on hand, and, as before, we made those truant bees turn right about face, and finally to settle down upon a low grapevine. Perhaps I should state right here, that two or three days before we commenced using the fountain pump, we had one swarm that actually absconded. One of our boys chased after them until he came to some swampy land, when he had to stop and see them go off.

The timely and skillful use of the fountain pump, I think, would keep almost all the swarms from going outside of the premises of the apiarist. All he has to do is to head them off, and keep spraying them until they conclude they will *have* to settle. The effect of the spraying not only impedes the flight of the bees by dampening their wings, but it may have the effect of making them think that it is raining, and that they had better put aside their purpose. After spraying the bees for some time, I have seen them become so tired, evidently, that they would drop down from exhaustion. With their fore legs they would rub their eyes; with their middle legs they would rub the thorax, and with their hind legs they would dry their wings. It is a little amusing to see them brush themselves up after a good dousing.

Sometimes it is not advisable to use a fountain pump. Just as soon as a few bees show a disposition to cluster upon any particular place, we cease from forcing water upon them, unless, perchance, some other bees are trying to establish another location for a cluster more inaccessible. Again, with a very strong swarm I find that it takes a very large amount of spraying to have any effect upon them.

#### THE SMITH PUMP NOT SUITABLE.

I have tried our cheap dollar pump, but it won't answer at all for spraying swarms, although it will do very well for garden purposes.

#### THE FOUNTAIN PUMP, AND CLIPPING QUEENS' WINGS.

The use of the fountain pump might be

largely if not altogether dispensed with if we clipped our queens' wings. Swarms could then be hived in exactly the same manner as A. E. Manum described and illustrated a year ago. Still, a great many times a swarm will come out with a virgin queen. It is then that the fountain pump with two or three uses will pay for itself. Were it not for the fact of our filling orders, and the preferences of our different customers, I do not know but I should be in favor of clipping queens' wings here at the Home of the Honey-bees. One colony having a valuable imported queen, swarmed out. We made them come down, secured them in the basket, and hived them on foundation with a frame of unsealed brood to hold them. The next day a number of swarms came out; and as several came out simultaneously it was impossible to locate the source of each one. Toward the close of the day, when we examined the recently hived swarm with the imported queen above mentioned, I found that they had decamped, leaving only a few hundred bees to take care of the frame of brood. That they were somewhere in the apiary, and had been hived, I had no doubt; but where, was the question. If her wings had been clipped, we could have secured the swarm by itself.

#### HIVING UPON UNSEALED BROOD.

Out of some 35 or 40 swarms which we have hived during the last few days, as nearly as we can make out some 7 or 8 of this number have actually left their frames of unsealed larvæ. While a frame of brood tends very greatly to hold the swarm, it is by no means infallible.

## GLEANINGS IN BEE CULTURE.

*Published Semi-Monthly.*

A. I. ROOT,  
EDITOR AND PUBLISHER,  
MEDINA, OHIO.

TERMS: \$1.00 PER YEAR, POSTPAID.

For Clubbing Rates, See First Page of Reading Matter.

MEDINA, JULY 15, 1889.

I had rather be a doorkeeper in the house of my God than to dwell in the tents of wickedness.—PSALM 84: 10.

#### BUSINESS UP TO DATE.

We are still having quite a run of business, and it is approaching the middle of July. Orders usually begin to slacken up about the first of this month. We expect to be entirely caught up in a day or so.

#### MORE IMPROVEMENTS AT THE HOME OF THE HONEY-BEES.

WELL, we have not got to tear down our barns and build greater, exactly, but we are obliged to add more boiler capacity. We are now making preparations to tear down our 60-foot chimney, and build in its stead another one 80 feet tall, 38 inches in diameter inside, with an 8-ft. base. We expect to add another boiler, alongside of our old one, to

give us a boiler capacity of 120 horse-power. Our business has been such that our 60 horse boiler has hardly been adequate to keep the machinery moving at full speed.

#### THE POULTRY DEPARTMENT OF THE CANADIAN BEE JOURNAL.

We have for a long time wanted to congratulate the *Canadian Bee Journal* on securing the services of so competent a person as W. C. G. Peters as poultry editor. He is full of the subject, and his editorials show that he has had a great deal of practical experience.

#### THE SEASON IN AUSTRALIA.

WHILE we bee-keepers of the Northern States are enjoying a good honey-flow, and some hot weather, the bee-keepers of Australia are now fairly into winter. The *Australian Bee Journal* for June 1, 1889, says: "We are now fairly into winter; and if the instructions given previously have been carried out, the colonies should be in good condition to withstand the cold and damp to be expected during the next month or two." This does not sound much like our weather here, does it? Seasonable hints for Australia would hardly be seasonable for the United States.

#### THE HONEY-FLOW AT THIS DATE.

HERE it is July 12, and the honey is still coming in at a good rate, but basswood has not begun to yield to any extent yet. In fact, it is doubtful whether it will yield at all in our locality. In the basswood orchard, some two miles to the north of the Home of the Honey-bees, there is only about one tree that has even buds on, out of the 4000, so our basswood orchard probably will not yield any great amount of nectar this year. As nearly as we can discover along the roads, there are very few basswoods out anywhere. Evidently it is one of the off-years for this favored tree of the bee-keeper. *Later.*—Honey is coming in some from basswood after all.

#### OFF FOR WISCONSIN.

The senior editor started for Wisconsin, Thursday, July 11. Blue Eyes accompanies him as far as Chicago, whence she takes the steamer for Manistee, Mich., where she will visit relatives. From Chicago, A. I. Root will go to Dr. C. C. Miller's, in Marengo, Ill., and thence he proceeds further to the northwest to that great basswood belt in Richland Co., Wis. Basswood is expected to be at its height about the time he will arrive there, which will be about the 15th or 16th. He has taken along with him a little Kodak camera, to take views of apiaries, gardens, etc. He was given full instructions how to "shoot it off," and it is expected that he will write up this trip, and perhaps illustrate it in the forthcoming issues of GLEANINGS.

#### SOMETHING FOR OUR GERMAN BEE-FRIENDS.

We have just received from C. J. H. Gravenhorst a little work in the German language, called the "Bee-keeper's Album." It contains 51 pages of matter devoted to biographical sketches of some of the leading lights in apicultural science; namely, Dzierzon, Langstroth, Baron Berlepsch, Pastor Schonfeld, Hruschka, Mehring, Baron Ehrenfels, Kanitz, Louis Huber, Weygandt, Cowan, and Sartori. Elegant portraits of all those men are given in the highest style of the engraver's art. Many fine cuts of hives, apiaries, etc., are also given. As the present work is No. 1, we presume that friend Gravenhorst is going to publish at stated intervals



more of a similar character. We trust that such is the case; for although the language is foreign to us, the pictures are readily translated into any tongue desired. The price is, we understand, 50 pfennig, or half a mark—which would be equivalent to 12 cents. The paper and printing are of the very best. We cordially recommend the work to all who can read German. The book is  $7\frac{1}{2} \times 6\frac{1}{2}$  inches.

#### MAKE ALL YOU CAN OF THE FAIRS.

OUR experience last fall at the Ohio Centennial at Columbus has taught us that much can be done at fairs toward educating the people in our favorite pursuit, and correcting many of the false ideas current among them. Much can be done toward correcting the public mind on the subject of manufactured (?) honey by distributing our \$1000 reward cards, and by having a comb-foundation mill, with samples of wax sheets before and after they have passed through the mill. The worst falsehoods are those which contain a grain of truth, and there is no doubt but that the comb-foundation industry furnishes a foundation and gives strength to the story of manufactured comb honey. In the minds of the great mass of the people, except those directly interested in the use of comb foundation, this product has made a vague impression, and it is not strange, knowing human nature as we do, that this foundation is exaggerated into fully completed comb, and filled with honey or a substitute. One of the best ways to correct the false notions, and shear off the great overgrowth of imagination from the facts is to show to the masses at the fairs how comb foundation is made, explaining the impossibility of accomplishing the manufacture of complete comb honey. Have a piece of natural comb and a piece of the thinnest comb foundation and a magnifying-glass, so that each may be examined. Hand to the skeptical and unbelieving one of our reward cards, offering \$1000 for proof to the contrary of your statements. In all your efforts, be patient and Christlike, remembering that these neighbors who have been misinformed have not had your opportunities for knowing the facts. If this policy is persistently carried out there can not fail to come increased confidence in bee-keepers as a class and their product, and increased consumption of honey.

#### THE PARIS EXPOSITION, AND THE UNITED STATES HONEY EXHIBIT.

The Paris correspondent of the *British Bee Journal*, under date of June 27, says:

The United States have a very considerable exhibit, contributed by nearly all the leading makers in the States, and shown as a joint collection. It is arranged on a floor-space of about 30 ft. long by 4 feet wide, and on the walls above are various small articles; also the well-known diagrams by Mr. Cheshire, of the British Bee-keepers' Association.

In regard to our own exhibit, he continues:

Mr. A. I. Root, of Medina, O., of course is to the fore. He shows his well-known lawn hive, his two-story hive, and his  $1\frac{1}{2}$ -story hive. These are so well known as to need no further comment. There is also one of his latest natural-based foundation-machines, and a large can for catching the wax cappings when extracting is done on a large scale, as it is in the States.

Of W. T. Falconer's exhibit he says:

Everything is got up in splendid style, and is clear varnished.

The world-wide word "Chautauqua," as applied to Falconer's hive, is disguised by the printers, doubtless, under the name "Chantangua."

Of the sections made by G. B. Lewis & Co., of Watertown, Wis., the correspondent says:

For an article that is produced by the million, they can not be surpassed.

Dr. Tinker's perforated zinc is very much admired, and the writer is very anxious to know where the doctor gets such perfect zinc. Why, he makes it himself, at his home in New Philadelphia, O. Of Dadant & Son's foundation the writer says:

It is so thin and clear that their name, which is printed on paper, and placed behind the foundation, shows plainly, and can be read easily through it.

The honey show itself is pronounced as nothing remarkable. Some of the honey was broken in shipping. "There is not really," it is said, "a well-finished section in the whole lot." The writer closes up by saying:

The inscription on top of the large stand is in letters constructed out of four-piece sections, and is very pretty, and in good taste. It reads thus: "Les insectes nuisible et utiles," and the remaining three glass cases are filled with the specimens of the useful and harmful insects of the United States.

#### THE ST. JOSEPH EXPOSITION.

ONE of our subscribers, Mr. Thos. B. Nichol, of St. Joseph, Mo., forwards us some of the advance proofs of the premium-list of the St. Joseph, or, as it is called, the New Era Exposition. In looking down over the rules and regulations we note the following:

It has been urged by those responsible for the financial success of the exposition, that unless the horse-jockey had a chance at a purse of thousands of dollars, while the farmer competed for premiums of from fifty cents to five dollars, the exposition could not be sustained.

The New Era Exposition will try the experiment of reversing the order of things, relying on the agriculturists (who have hitherto loudly and justly complained) for an appreciation of efforts and a hearty co-operation.

This we believe is a step in the right direction; and the sooner the managers of our expositions begin to see it, the better it will be for them financially. The premiums offered on comb and extracted honey, bees and queens, in the Bees and Honey department, are some of the largest we have ever seen. No. 21, display of comb honey, largest and most attractive, first premium, \$50.00; second, \$25.00; No. 22, display of extracted honey, largest and most attractive, first premium, \$50.00; second, \$25.00. No wonder that the St. Joseph folks can afford to offer more for farm products when the horse-jockey is made to take a back seat. Instead of getting his thousand or two thousand dollars, he must be content with his proportion if he gets any at all. Let us take a case in point: The Buffalo International premium-list is at hand. While they offer quite a number of premiums of \$600, \$400, \$300, \$200, and so on, for single horses, the premiums on regular farm produce scarcely ever go beyond 10 or 20 dollars. The Buffalo Exposition alone offers something over \$11,000 in premiums for blooded horses alone. The same exposition offers about as many hundreds for the products of the soil. Perhaps we should mention that the Buffalo International Fair, to be held Sept. 3-13, offers very liberal premiums in the apianian department—something like \$450. For comb and extracted honey there are two \$30.00 premiums—a number of \$15.00 and \$10.00 premiums. But they offer only a silver medal for apianian supplies. Guess we won't exhibit this year. Mr. O. L. Hershisier, formerly a student at Lansing, Mich., under Prof. A. J. Cook, has charge of the department.

## DON'T SELL TOO CHEAP.

The following very seasonable note came to hand just as we go to press. Those who have honey to sell had better bear in mind friend Heddon's suggestions.

Pleased at the partial improvements upon the past two seasons, many bee-keepers have been praising 1889 as a honey year. It begins to look plain to me that, taking the country all over, we are not going to have an average crop by considerable. The past two poor seasons have cleared the market of honey, and got consumers into the habit of paying better prices than formerly. As it is a fact that we need it to keep our business equally profitable with other lines, let us hold up to this price. In this location the season is not as good, up to this date, as within the past two very poor years. We have not one-sixth of a crop. Basswood is in full bloom, fully half past, and not any thing like an average yield so far. Clover bloomed profusely, but yielded very stingily. This ends the white-honey crop. Pleurisy is not yet plentiful enough here to produce surplus honey to much extent in so large apiaries as I keep. It is just getting into bloom, and the bees are thick upon it, while they leave every other plant except that, for the basswood. We can see the honey standing in the blossoms in little drops, and the bees crawling all over it, rapidly loading and going home. Only a few years ago we could not find a dozen plants within the radius of our apiaries. In a few years more we expect it to yield us a good surplus crop, if nothing unforeseen happens. Do not be in a hurry to dispose of your honey. Whatever you do sell early, do not sell it cheap. Let us wait till we see that we have to.

Dowagiac, Mich., July 13.

JAMES HEDDON.

## SPECIAL NOTICES.

## DECLINE IN BEESWAX.

We quote a decline of 2 cts. per lb. in price of wax from that last quoted. Revised prices will be 23 cts. cash; 26 cts. in trade for average wax delivered here. To those who wish to buy, the price will be 28 cts. for average quality, and 32 for best selected. If those who send us wax would put their name and address on the package, or on a slip of paper in the package, so we could have a clew as to where it comes from, it would save us much trouble and annoyance.

## A DROP IN THE PRICE OF THE WHITMAN PUMP.

We have received lower prices from the manufacturers of this excellent article, the merits of which are set forth in Our Own Apiary. It is only fair that we give our customers the advantage of the decline. Our catalogue price is \$7.50. We will now offer them for \$6.00 each; in lots of 3, for \$5.50 each. For larger quantities, write for prices. They may be sent by mail for 60 cts. each extra. Our old price was \$7.50. This is a strong brass pump, and will send a stream of water perpendicularly 40 feet, or it will send a spray, such as is used for bringing down swarms, 30 feet high. Of all the pumps we have experimented with, none answer so well as swarm-arresters as the Whitman.

## DISCOUNT ON GOODS FOR FAIRS.

In view to the education of the people to more correct views of our pursuit, as indicated in an editorial elsewhere, we will, as has been our custom for years, furnish samples at a discount. All goods of our manufacture will be furnished at 25 per cent discount, the only conditions being that you will be allowed a discount only on samples (one of a kind), that they must be entered for exhibition at one or more fairs, and that you distribute judiciously the advertising matter we send along with the goods. If you secure any premiums, the money thus secured is yours for your trouble, in addition to the commission we allow you when you buy the goods. We will consider a box of 500 sections, 1 lb. of each grade of foundation, 50 brood-frames, flat, 50 wide frames, as units, and subject to discount as samples. We will also furnish free all you can judiciously use of the \$1000 reward cards.

## AN ATTRACTION FOR FAIR-EXHIBITS.

Some of our old customers will remember that we used to advertise and furnish sections  $4\frac{1}{4}$  in. square, with fancy-shaped center, such as stars, hearts, diamonds, etc. We have not made these of late, but we have had frequent calls for letters to be filled with comb honey by the bees, to form mottoes. We have never been well equipped for making these till now. We have a full set of pattern letters to work from, and they are of such a size that three will fill an 8-section wide frame, the

openings forming the letters being about  $7\frac{1}{2}$  in. high and 5 in. wide. M and W, of course, are wider, and I narrower. The letters are of the following pattern:

## FAIR, 1889.

The price will be 10 cts. per letter or figure. With thin foundation inserted, 15 cts. per letter or figure. In ordering, if you will write the letters in the order you want them, we can make 3 letters in one piece, just right to slip into a wide frame. Or if you don't happen to have a wide frame, simply tack a bar on top, to suspend it from, and hang it in the hive without a frame around it. The 4 figures, 1889, will go in a frame. To make the letters, we simply tack two  $\frac{3}{4}$ -inch boards together, mark the letter, and jig it out on a scroll-saw. To put in the foundation, separate the boards, lay a sheet between, and tack them together again. We make the letters large, because the bees will work in them more readily, and they are much more conspicuous when filled.

## PREMIUM OFFER.

To those intending to make an exhibit, and who will agree to distribute judiciously the circulars we will send, we will furnish free one letter or figure for each dollar's worth of goods ordered, if the order amounts to \$4.00 or more. If foundation is inserted in each letter, we will furnish 2 letters for every \$3.00 worth of goods ordered.

## KIND WORDS FROM OUR CUSTOMERS.

I received the package of tomato plants at 10 P. M. last night; placed them in a little water over night, and potted them this morning. They were in prime order, hardly wilted, or a leaf injured. They can not fail to grow. I hope to have a good report to make next fall.

CHAS. J. JACKSON.

Newton, Kan., June 27, 1889.

## GOT HIS DOLLAR'S WORTH.

We all enjoyed reading your travels very much, and, in fact, all the Home talks and good things. If a bee-keeper can't get a dollar's worth from GLEANINGS he surely does not read and profit thereby. Please renew my subscription for one year.

R. R. RYAN.

Bradshaw, Neb., June 13, 1889.

## THOSE DOVETAILED HIVES "RIGHT TO THE DOT."

I am well pleased with those ten Dovetailed hives I received of you; they are right to the dot, and don't you forget it. I put up the 500 sections which came also, without breaking a single one in the bunch.

MARTIN F. WILLIAMSON.

Friendly, W. Va., June 17, 1889.

## HOW THE BUCKWHEAT WENT OFF.

Before I forget it I owe you a vote of thanks, or that doesn't exactly express it. I am very thankful to you for your kindness. I will try to make good the amount on GLEANINGS. It has sent me half a dozen calls for buckwheat. Can't a man touch you without getting himself spread out? Well, I will make it all right some time.

J. H. KENNEDY.

Quenemo, Kan., June 12, 1889.

## THE DOVETAILED HIVE JUST THE HIVE FOR THE GREAT MASS OF BEE-KEEPERS.

The Dovetailed hives ordered of you arrived in first-class order, and freight very moderate. We admire your ingenious method of crating, and are much pleased with the hives. We consider the Dovetailed as just the hive for that great class of bee-keepers who, farmers also, make bee-keeping an extra; have few appliances for putting hives together, and devote their attention to the production of comb honey exclusively.

R. N. LEARNED.

Newton, N. J., May 27, 1889.

**FOR SALE.**—Italian queens, tested, at \$1.00 each, 6 for \$5.00; untested, 75 cents each. No foul brood. 121d L. A. RESSLER, Napanee, Ind.

**WILL** pay 10 cents each for Oct. 1, 1882, number of GLEANINGS. A. I. ROOT, Medina, Ohio.



# GLEANINGS IN BEE CULTURE.

## Books for Bee-Keepers and Others.

Any of these books on which postage is not given will be forwarded by mail, *postpaid*, on receipt of price.

In buying books, as every thing else, we are liable to disappointment, if we make a purchase without seeing the article. Admitting that the bookseller could read all the books he offers, as he has them *for sale*, it were hardly to be expected he would be the one to mention all the faults, as well as good things about a book. I very much desire that those who favor me with their patronage shall not be disappointed, and therefore I am going to try to prevent it by mentioning all the faults so far as I can, that the purchaser may know what he is getting. In the following list, books that I approve I have marked with a \*; those I especially approve, \*\*; those that are not up to times, †; books that contain but little matter for the price, large type, and much space between the lines, ‡; foreign, §.

## BIBLES, HYMN-BOOKS, AND OTHER GOOD BOOKS.

8   Bible, <i>good print</i> , neatly bound.....	25
10   Bunyan's Pilgrim's Progress**.....	35
6   First Steps for Little Feet. By the author of the Story of the Bible. A better book for young children can not be found in the whole round of literature, and at the same time there can be found a more attractive book. Beautifully bound, and fully illustrated. Price 50c. Two copies will be sold for 75 cents. Postage six cents.	
5   Harmony of the Gospels.....	35
3   John Ploughman's Talks and Pictures, by Rev. C. H. Spurgeon*.....	10
1   Gospel Hymns, consolidated Nos. 1, 2, 3 and 4, words only, cloth, luc; paper.....	05
2   Same, board covers.....	20
5   Same, words and music, small type, board covers.....	45
10   Same, words and music, board covers.....	75
3   New Testament in pretty flexible covers.....	05
5   New Testament, new version, paper cover.....	10
5   Robinson Crusoe, paper cover.....	20
15   Story of the Bible**.....	1 00
A large book of 700 pages, and 274 illustrations. Will be read by almost every child.	
5   The Christian's Secret of a Happy Life**.....	25
8   Same in cloth binding.....	50
1   "The Life of Trust," by Geo. Muller**.....	1 25
1   Ten Nights in a Bar Room, by T. S. Arthur*.....	05

## BOOKS ESPECIALLY FOR BEE-KEEPERS.

As many of the bee-books are sent with other goods by freight or express, incurring no postage, we give prices separately. You will notice, that you can judge of the size of the books very well, by the amount required for postage on each.

Postage.] (Price without postage.)	
12   A B C of Bee Culture** Paper.....	88
15   A B C of Bee Culture** Cloth.....	1 10
5   A Year Among the Bees, by C. C. Miller**.....	70
14   Bees and Bee-keeping, by Frank Cheshire, England, Vol. I,**§.....	2 36
21   Same, Vol. II,**§.....	2 79
or, \$5.25 for the two, postpaid.	
1   Bees and Honey, by T. G. Newman.....	1 00
15   Cook's New Manual ** Cloth.....	1 35
5   Doolittle on Queen Rearing**.....	95
2   Dzierzon Theory**.....	10
1   Foul Brood; Its management and cure; D. A. Jones**.....	09
1   Honey as Food and Medicine.....	5
10   Langstroth on the Hive and Honey-Bee**.....	1 40
15   Langstroth Revised, by Ch. Dadant & Son**.....	1 85
10   Quinby's New Bee-Keeping**.....	1 40
10   Queen-Rearing, by H. Alley*.....	1 00
4   Success in Bee Culture, by James Heddon*.....	46
1   The Production of Comb Honey, by W. Z. Hutchinson*.....	25

The Apiary; or, Bees, Bee-Hives, and Bee Culture, by Geo. Neighbour & Sons, England**.....	1 75
British Bee-keeper's Guide - Book, by Thos. Wm. Cowan, Esq., England**§.....	40
3   Merrybanks and His Neighbor, by A. I. Root.....	25

## MISCELLANEOUS HAND-BOOKS.

5   A B C of Carp Culture, **.....	35
3   A B C of Potato Culture, Terry**.....	35
This is T. E. Terry's first and most masterly work. The book has had an enormous sale, and has been reprinted in foreign languages. When we are thoroughly conversant with friend Terry's system of raising potatoes, we shall be ready to handle almost any farm crop successfully. It has 48 pages and 22 illustrations.	
5   An Egg-Farm, Stoddard**.....	45
1   Barn Plans and Out-Buildings*.....	1 50
1   Cranberry Culture, White's.....	1 25
1   Canary Birds; paper, 50c; cloth*.....	75
1   Draining for Profit and Health, Warring.....	1 50
5   Eclectic Manual of Phonography; Pitman's System; cloth.....	50

6   Fuller's Practical Forestry*.....	1 40
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10 | Farming For Boys\*..... 1 15  
This is one of Joseph Harris' happiest productions, and it seems to me that it ought to make farm-life fascinating to any boy who has any sort of taste for gardening.

10   Fuller's Grape Culturist**.....	1 40
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7   Farm, Gardening, and Seed-Growing, by Francis Brill**.....	90
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This is by Francis Brill, the veteran seed-grower, and is the only book on gardening that I am aware of that tells how market-gardeners and seed-growers raise and harvest their own seeds. It has 166 pages.

10   Gardening For Pleasure, Henderson*.....	1 40
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While "Gardening for Profit" is written with a view of making gardening PAY, it touches a good deal on the pleasure part; and "Gardening for Pleasure" takes up this matter of beautifying your homes and improving your grounds, without the special point in view of making money out of it. I think most of you will need this if you get "Gardening for Profit." This work has 246 pages and 134 illustrations.

12   Gardening for Profit,** New Edition.....	1 85
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This is a late revision of Peter Henderson's celebrated work. Nothing that has ever before been put in print has done so much toward making market-gardening a science and a fascinating industry. Peter Henderson stands at the head, without question, although we have many other books on the rural employments. If you can get but one book, let it be the above. It has 376 pages and 138 cuts.

8   Gardening for Young and Old, Harris**.....	90
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This is Joseph Harris' best and happiest effort. Although it goes over the same ground occupied by Peter Henderson, it particularly emphasizes thorough cultivation of the soil in preparing the ground, and this matter is adapted to the young people as well as to old is brought out in a most happy vein. If your children have any sort of fancy for gardening it will pay you to make them a present of this book. It has 187 pages and 46 engravings.

1   Gray's School and Field Book of Botany... ..	1 80
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5   Gregory on Cabbages; paper*.....	25
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5   Gregory on Squashes; paper*.....	25
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5   Gregory on Onions; paper*.....	25
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The above three books, by our friend Gregory, are all valuable. The book on squashes especially is good reading for almost anybody, whether they raise squashes or not. It strikes at the very foundation of success in almost any kind of business.

10   Household Conveniences.....	1 40
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2   How to Propagate and Grow Fruit, Greel*.....	25
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5   How to Make Candy**.....	45
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10   How to Keep Store*.....	1 00
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10   Irrigation for the Farm, Garden, and Orchard, Stewart*.....	1 40
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This book, so far as I am informed, is almost the only work on this matter that is attracting so much interest, especially recently. Using water from springs, brooks, or windmills, to take the place of rain, during our great droughts, is the great problem before us at the present day. The book has 274 pages and 142 cuts.

3   Maple Sugar and the Sugar-Bush,**.....	35
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By Prof. A. J. Cook. This was written in the spring of 1887, at my request. As the author has, perhaps, one of the finest sugar-camps in the United States, as well as being an enthusiastic lover of all farm industries, he is better fitted, perhaps, to handle the subject than any other man. The book is written in Prof. Cook's happy style, combining wholesome moral lessons with the latest and best method of managing to get the finest sugar and maple syrup, with the least possible expenditure of cash and labor. Everybody who makes sugar or molasses wants the sugar-book. It has 42 pages and 35 cuts.

10   Money in The Garden, Quinn*.....	1 40
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1   Poultry for Pleasure and Profit**.....	10
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11   Practical Floriculture, Henderson*.....	1 35
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1   Peach Culture, Fulton's.....	1 50
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10   Profits in Poultry.....	90
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2   Silk and the Silkworm.....	10
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10   Small-Fruit Culturist, Fuller*.....	1 40
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3   Strawberry Culturist, Fuller*.....	15
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10   Success in Market-Gardening*.....	90
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This is new book by a real, live, enterprising, successful market-gardener who lives in Arlington, a suburb of Boston, Mass. Friend Rawson has been one of the foremost to make irrigation a practical success, and he now irrigates his grounds by means of a windmill and steam-engine whenever a drought threatens to injure the crops. The book has 208 pages, and is nicely illustrated with 110 engravings.

10   Talks on Manures*.....	1 90
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This book, by Joseph Harris is, perhaps, the most comprehensive one we have on the subject, and the whole matter is considered by an able writer. It contains 366 pages.

2   The Carpenter's Steel Square and its Uses; Hodgson; Abridged.....	15
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2   Treatise on the Horse and his Diseases.....	10
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10   The New Agriculture, or the Waters Led Captive.....	1 00
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3   Winter Care of Horses and Cattle.....	40
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This is friend Terry's second book in regard to farm matters; but it is so intimately connected with his potato-book that it reads almost like a sequel to it. If you have only a horse or a cow, I think it will pay you to invest in the book. It has 44 pages, and 4 cuts.

8   What to Do, and How to be Happy While Doing It, by A. I. Root.....	50
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3   Wood's Common Objects of the Microscope**.....	47
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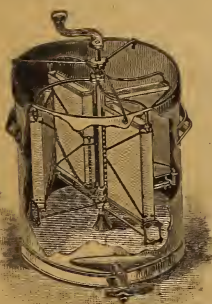
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